2009 HABITAT ASSESSMENT
MSHCP CONSISTENCY ANALYSIS
APN 125-101-02
Community of Coto de Caza
Orange County, California
Canada Gobernadora Quadrangle
Township 7S, Range 7W, portions of Sections 1 and 2

Prepared For:

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Report Date: September 25, 2009
Revised January 8, 2010

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CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: _____ Signed: _____

USFWS Certification: I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Permit #: TE060175-2 Signed: _____

In spring and summer 2009, Teresa Gonzales and Nick Landers of Gonzales Environmental Consulting, LLC (GEC) updated the original biological resources assessment of the project site that had been conducted in 2008. The purpose of our assessment was to characterize biological resources on the site, and to identify any biological constraints to land-use changes. The site consists of seven vegetation communities, characterized as C coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas. The project site has been subject to anthropogenic disturbances.

Orange County Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP)

The site is within the Orange County Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP). Therefore, the proposed project will impact designated open space/reserve areas.

Endangered, Threatened and Sensitive Species

Several special-status plant and animal species have the potential to occur on site, many-stemmed live-forever (*Dudleya multicaulis*) and coastal California gnatcatcher (*Polioptila californica californica*) were detected within the project limits or immediately adjacent. *A circumstance of a negative result is not necessarily evidence that the species does not exist on the site or that the site is not actual or potential habitat of the species*. *The survey results are only good for one year. Additional surveys, during the appropriate time of year may be required. Regardless of the survey results, sensitive species cannot be taken under State and Federal law. The survey report and any mitigation measures included do not constitute authorization for incidental take of any sensitive species.*

Streambed Resources

The proposed project impacts no potential federal jurisdiction, 2.11 acres of state jurisdiction. There are no wetlands on the project site.

Permits

The area is under the jurisdiction of the California Department of Fish and Game, and California Regional Water Quality Control Board. Permits/Agreements for activities within the streambed (Coast Live Oak) may be required by the California Regional Water Quality Control Board, since the NCCP/MSAA/HCP included Subarea 3 Coto de Caza potential future impacts to streambed areas. Final authority over the area rests with the appropriate agencies.

I. INTRODUCTION

This report was prepared by Gonzales Environmental Consulting, LLC (GEC) for Coto de Caza View Estates, Mission Viejo, California. The project is located in the Community of Coto de Caza, Orange County, California. The report summarizes results of literature review to determine the potential presence or absence of species of concern within the project vicinity and the results of the 2008 general biological survey as well as the 2008 field investigations conducted by GEC. In addition, the report provides an assessment of the potential impacts of the project on the biological resources on the project site.

GEC conducted biological surveys of the project site in 2008. This report documents the results of the surveys, provides a summary of the technical studies (attached as Technical Appendices), analyzes the effects of the proposed project on the identified biological resources and recommends mitigation measures for identified impacts.

PROJECT LOCATION

The site is located within San Bernardino Meridian in Sections 1 and 2, Township 7 South, and Range 7 West in Orange County, California (Figures 1, 2 and 3). This location is shown on the Canada Gobernadora, California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Canada Gobernadora 1979); page 923 (blocks 2D, and 3D) of the current Orange County Street Guide and Directory (Thomas Brothers Maps Design 2007). The approximate center of the site is located at 33.3532.44°N, 117.3427.87°W.

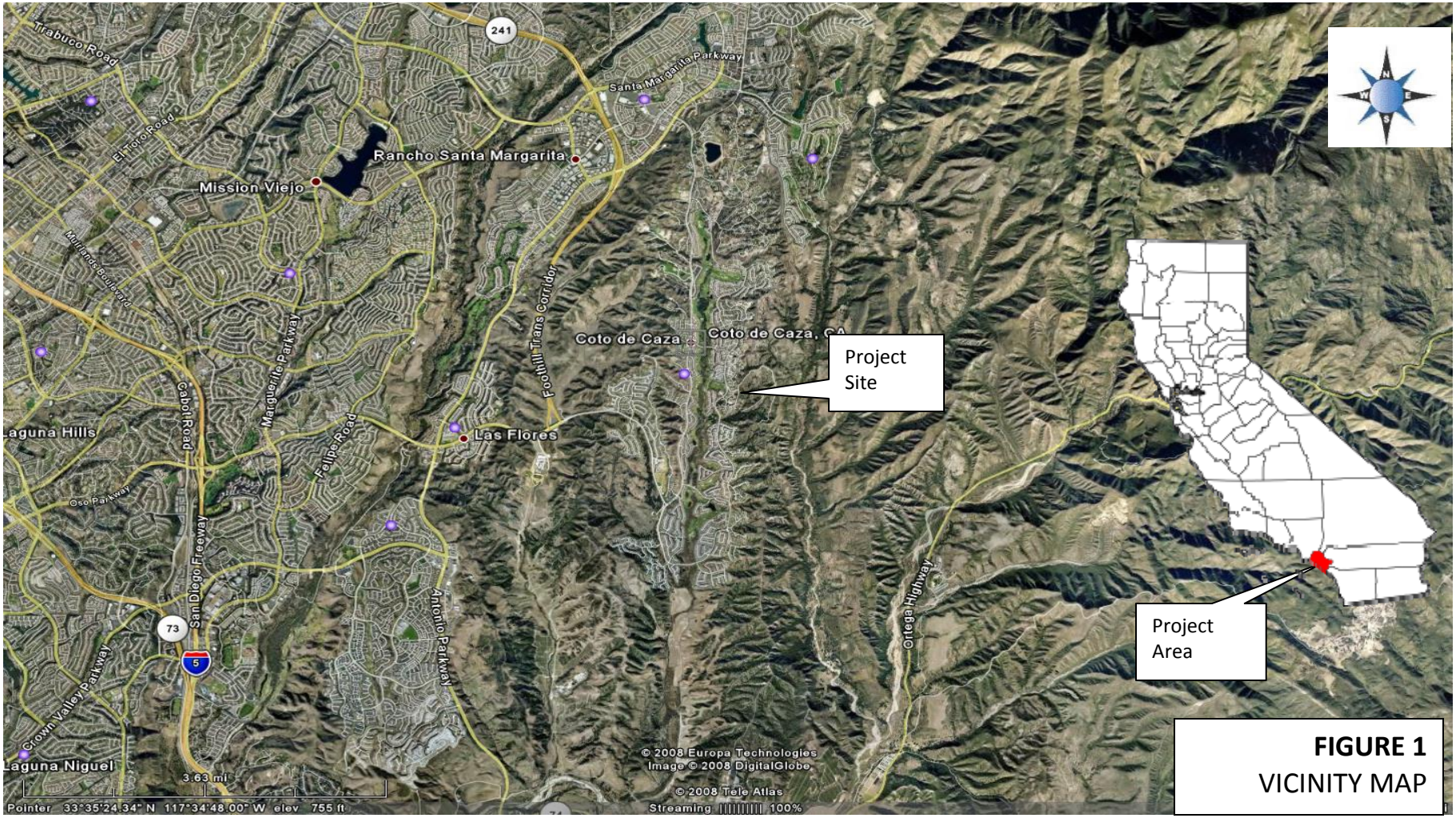
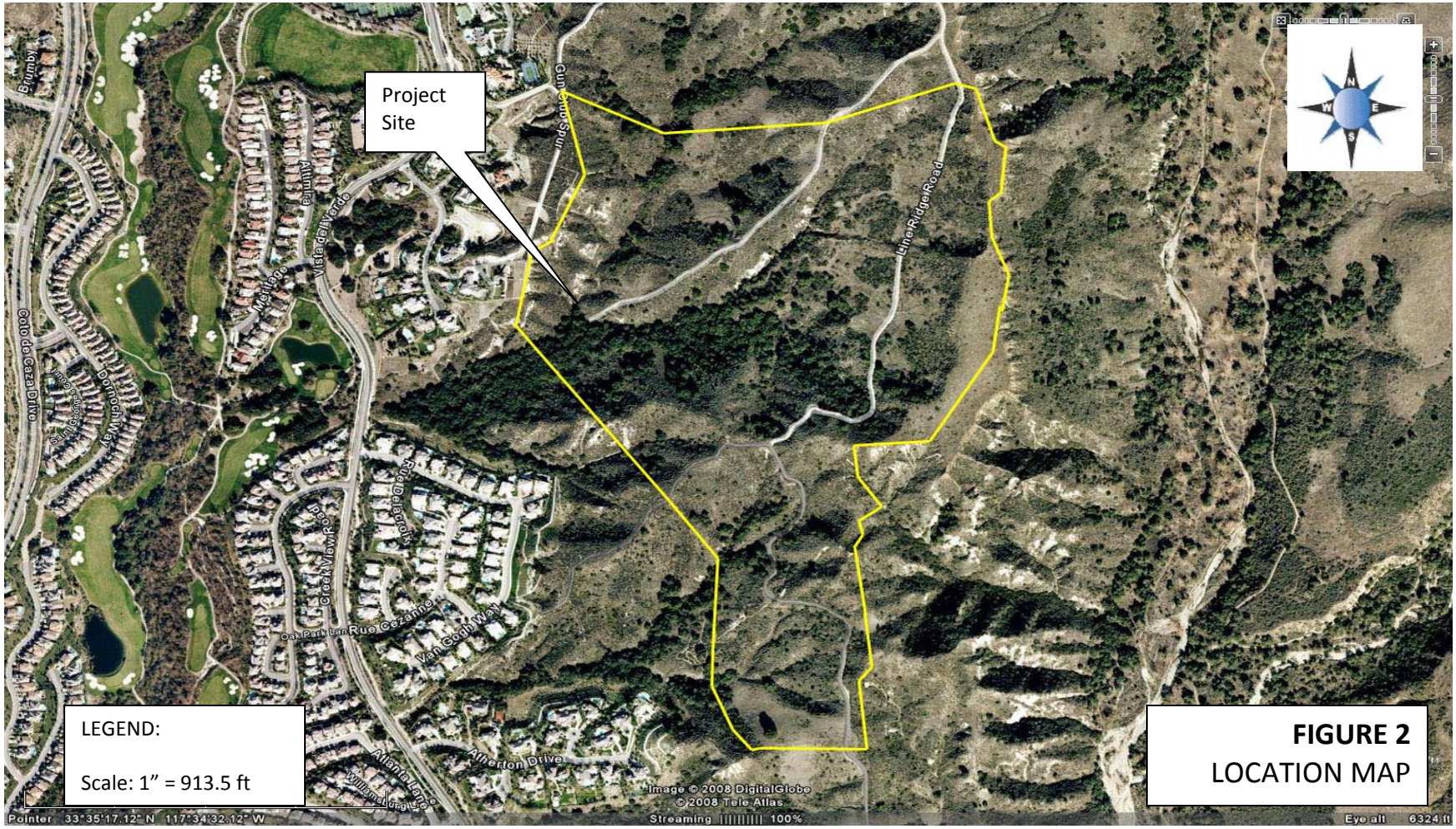


FIGURE 1
VICINITY MAP



Please note that this is an approximate locality map, and should not be used for calculations

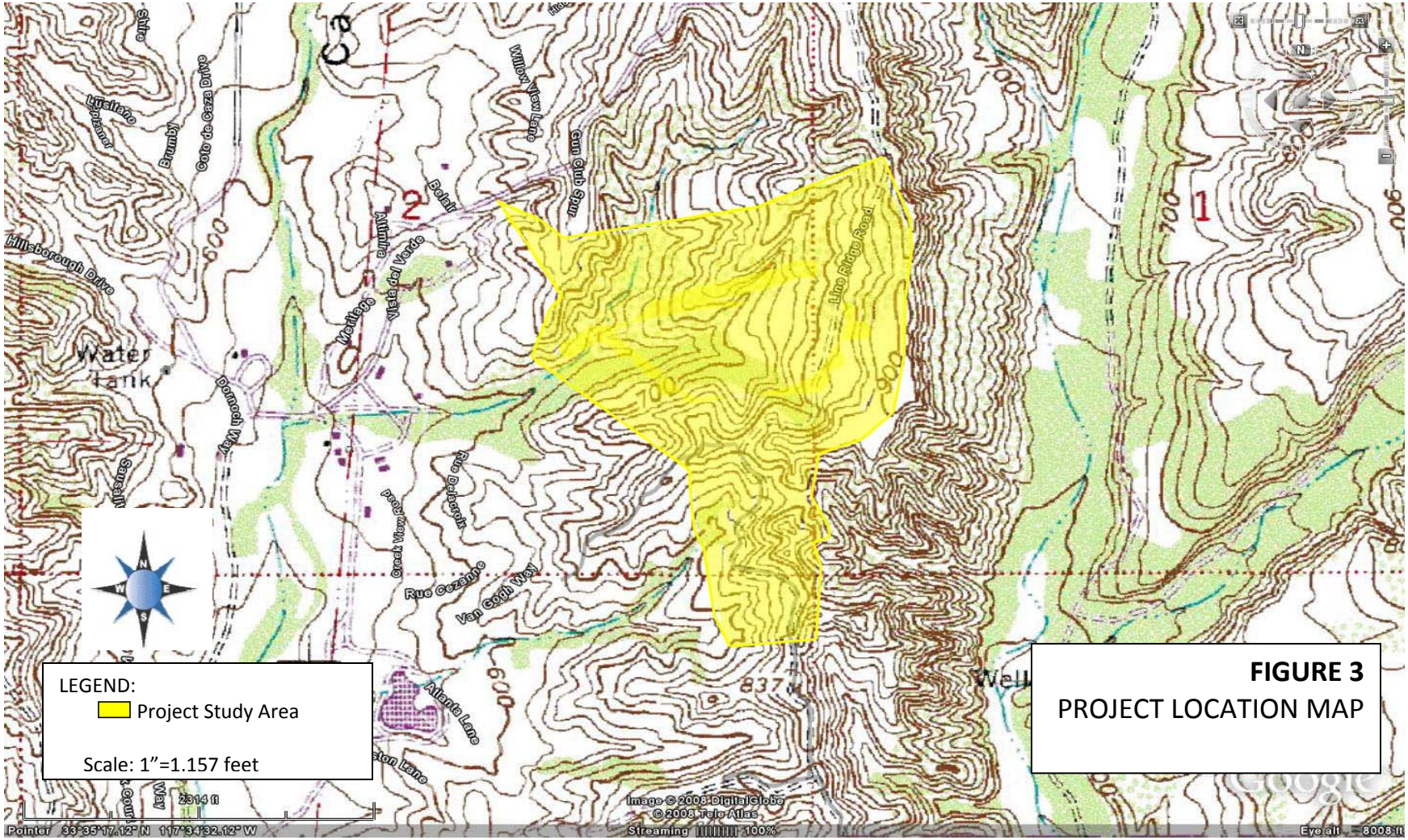


FIGURE 3
PROJECT LOCATION MAP

PROJECT DESCRIPTION

Proposed Project Area

Coto de Caza is an unincorporated area of Orange County, California, governed by the Orange County Board of Supervisors. Coto de Caza is a suburban planned community of about 4,000 homes, and one of Orange County's oldest and most expensive master planned communities. The project began in 1968, when it was envisioned as a hunting lodge, now the Coto de Caza Guest Lodges, and the community was completed in 2000. Around the town there are still undeveloped lots available for purchase as well as two 18-hole golf courses. Currently there are two club houses, one considered the "old club" and the other the "new club." The new club harbors the facilities between the golf courses and the tennis club. The old club, located in the residential area known as "the Village," once held tennis guru and teacher Vic Braden. The old club was also the home location for the Coto de Caza Youth Swim Team. The new Club, known as the Spa and Sports Club, recently added a two story spa and fitness club with state of the art exercising equipment.

The majority of the community is tract homes and semi-custom homes, with collections of customs on the outskirts off the main streets. Coto de Caza is twenty minutes from the Interstate 5 freeway and five minutes from the 241 toll road to Irvine and then Riverside County.

While some residents believe that "Coto de Caza" means "Preserve of the Hunt" in Portuguese, this is erroneous. The proper wording in Portuguese is "Couto de Caça". In actuality, "Coto de Caza" is Portuguese for "Reserve of Hunt" and implies that the reserve is private (Wikipedia).

Proposed Project Site

The terrain of the proposed project site is marginally steep hills, valleys and drainage swells. The site is sloping generally down from east to west, depending on location in the landscape. The site occurs at elevations between 700 and 850 feet above mean sea level. The site is undeveloped, open space in the foothills of the Santa Ana Mountains. The site has been disturbed by anthropogenic disturbances including off-road vehicular use. Multiple dirt roads traverse the project site, impacting plant and animal habitat.

Land immediately west of the proposed project site contains single-family residences accompanied by many non-native ornamental landscape plants, especially invasive trees. Construction of new homes continues to the northwest and southwest. Land to the east is currently open space (Starr Ranch).

Proposed Project Description

The proposed project site totals approximately 127 acres, of which a certain portion will be disturbed. The proposed residential project will consist of single-family residential lots, water quality basins, and open space areas. An internal network of streets and cul-de-sacs will provide access to the lots. Sewer, water, gas, electric, telephone, and cable television services will be extended onto the site from existing main lines.

SOUTHERN ORANGE COUNTY COORDINATED PLANNING PROCESS (SOCCPP)

Currently, local, state, and federal agencies, in cooperation with local landowners, are engaged in coordinated land use and natural resource conservation planning efforts to address future economic development within a 91,000 acre portion of Southern Orange County. The three planning processes underway are: 1) an amendment to the County's General Plan and Zone Change for the Rancho Mission Viejo "Ranch Plan"; 2) development of a Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) for the San Juan Creek and San Mateo Creek watersheds; and 3) development of a South County Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP).

The respective lead agencies and cooperating landowners involved with the development of these plans agree that a coordinated approach is the best method to address the sensitive biological, aquatic, and hydrological helpful hints of Southern Orange County. Although all of the lead agencies will coordinate the development and completion of the plans, each of the agencies will be required to prepare separate environmental decision documents for each plan (i.e., Environmental Impact Statements/Reports (EIS/EIR), in accordance with their respective legislative requirements and regulations (Orange County).

FEDERAL ENDANGERED SPECIES ACT

U.S. Fish and Wildlife Service (USFWS), under the auspices of the Federal Endangered Species Act (FESA) of 1973 (as amended), manages and protects federally listed endangered or threatened species. Endangered species are defined as species “in danger of extinction throughout all or a significant portion of its range”, while a threatened species is defined as “likely to become endangered in the foreseeable future”.

“Take” of listed wildlife species is prohibited under Section 9 (a) (1) (B) of the FESA. The term “Take” is defined as follows in Section 3 (18) of the FESA: “harass, harm, pursue, hunt, shoot, wound, trap, kill, capture or collect or to engage in any such conduct.” Harm is further defined as significant habitat alteration that results in death or injury to listed species by significantly impairing behavior patterns such as breeding, feeding, or sheltering. The FESA does not outlaw taking of plants. Instead, it prohibits removal and reducing to possession of endangered plants from federal land, maliciously damaging or destroying endangered plants found on federal land, and removing, cutting, digging up, damaging, or destroying endangered plants on non-federal land by anyone in knowing violation of state law. (See 16 U.S.C. Section 1538(a) (2) (B))

The USFWS can issue a permit for "take" of listed wildlife species incidental to otherwise lawful activities. Procedures for obtaining a permit for incidental take are provided for under Section 7 of FESA for federal properties or where federal actions are involved, and are identified under Section 10 of FESA for non-federal actions. A Section 7 consultation is also required for federal actions to ensure that the action does not jeopardize the continued existence of a listed species or adversely modify designated critical habitat.

- ESA Section 7: Applies to federal agencies undertaking an action (i.e., permit or license issuance or federal funding) that may affect an endangered species or designated critical habitat. Federal agencies are obligated to consult with the USFWS regarding proposed actions. Consultation between the "action agency" and USFWS may be formal or informal. Private applicants may participate in the process, in accordance with USFWS regulations.
- ESA Section 10(a) Permit: Applies if project implementation is anticipated to result in incidental take (i.e., inadvertent and incidental to otherwise lawful activities) of federally listed endangered and threatened species by non-federal entities. As issuance of an incidental, take permit is a federal action subject to the National Environmental Policy Act (NEPA), a Habitat Conservation Plan (HCP) and accompanying NEPA documentation (Environmental Assessment and Environmental Impact Statement or Finding of No Significant Impact) must be prepared and submitted to USFWS for approval prior to permit issuance.

CALIFORNIA ENDANGERED SPECIES ACT

The California Endangered Species Act (Fish and Game Code, § 2080, et seq.) requires state lead agencies to consult with the California Department of Fish and Game (CDFG) during the California Environmental Quality Act (CEQA) process to avoid jeopardy to threatened or endangered species.

MIGRATORY BIRD TREATY ACT AND FISH AND GAME CODE

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) implements an international treaty. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21).

The MBTA requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (1 February to 31 August, annually). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or the loss of habitat upon which the birds depend could be considered "take" and constitute a violation of the MBTA.

Sections 3503, 3503.5, and 3800 of the California Fish & Game Code (FGC) prohibit the take, possession, or destruction of birds, their nests or eggs.

WETLANDS AND STREAMBEDS

Three agencies generally regulate activities within streams, wetlands and riparian areas in California. The U.S. Army Corps of Engineers (ACOE) regulates activities under Section 404 of the federal Clean Water Act, the Regional Water Quality Control Board (RWQCB) regulates activities under Section 401 of the federal Clean Water Act and the CDFG regulates activities within wetlands under the FGC § 1600.

UNITED STATES ARMY CORPS OF ENGINEERS (ACOE)

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(2) All interstate waters including interstate wetlands;
(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:
(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or
(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...
(iv) All impoundments of waters otherwise defined as waters of the United States under the definition;

(4) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;

(5) The territorial seas;

(6) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.

(7) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

Note: Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark (OHWM), which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987, the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual provides detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands[1]);

- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

- hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year[2].

These requirements may or may not apply to isolated, non-navigable waters (vernal pools) pursuant to a January 9, 2001 U.S. Supreme Court decision *Solid Waste Agency of*

1 Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

2 For most of low-lying southern California, five percent of the growing season is equivalent to 18 days.

Northern Cook County v. U.S. Army Corps of Engineers [531 U.S. 159 (2001) (SWANCC)]. SWANCC eliminates CWA jurisdiction over isolated, intrastate, non-navigable waters where the sole basis for asserting CWA jurisdiction is the actual or potential use of the waters as habitat for migratory birds that cross State lines in their migrations.

In accordance with the Rapanos Guidance memorandum, implementing the Supreme Court's decision in the consolidated cases Rapanos v. United States and Carabell v. United States (herein referred to simply as "Rapanos") dated June 5, 2007 the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency will continue to assert jurisdiction over traditional navigable waters (TNWs) and all wetlands adjacent to TNWs. Under the Supreme Court decision jurisdiction can be asserted over a water, including wetlands, that is not a TNW by meeting either of the following two standards:

• The first standard, based on the plurality opinion in the decision, recognizes regulatory jurisdiction over a water body that is not a TNW if that water body is "relatively permanent" (i.e., it flows year-round, or at least "seasonally," and over wetlands adjacent to such water bodies if the wetlands "directly abut" the water body (i.e., if the wetlands are not separated from the water body by an upland feature such as a berm, dike, or road). As a matter of policy, field staff will include, in the record, any available information that documents the existence of a significant nexus between a relatively permanent water body that is not perennial and a TNW.

• The second standard, for tributaries that are not relatively permanent, is based on the concurring opinion of Justice Anthony P. Kennedy, and requires a case-by-case "significant nexus" analysis to determine whether waters and their adjacent wetlands are jurisdictional. A "significant nexus" may be found where waters, including adjacent wetlands, affect the chemical, physical or biological integrity of TNWs. Factors to be considered in the "significant nexus" evaluation includes:

- The flow characteristics and functions of the tributary itself in combination with the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of TNWs.

- The consideration of hydrologic factors including, but not limited to, the following:

  - Volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary

  - Proximity to the traditional navigable water

  - Size of the watershed

- Average annual rainfall

- Average annual winter snow pack

• The consideration of ecologic factors including, but not limited to, the following:

- The ability for tributaries to carry pollutants and flood waters to TNWs

- The ability of a tributary to provide aquatic habitat that supports a traditional navigable water

- The ability of wetlands to trap and filter pollutants or store flood waters

- Maintenance of water quality

REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

Regional Water Quality Control Board (RWQCB) has jurisdiction over similar "Wetlands" and "Waters of the United States" under Section 401 of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act (Porter-Cologne). Permitting of activities that would result in a discharge of soils, nutrients, chemicals, or other pollutants into Waters of the United States or adjacent wetlands, which would affect the water quality of those bodies and the area watershed, are regulated by the Board. The RWQCB also regulates discharge activities affecting Waters of the State as defined in Porter-Cologne. Isolated, non-navigable waters (e.g., vernal pools), are covered under Porter-Cologne. Statewide Waste Discharge requirements for dredged or fill discharges to waters deemed by the ACOE to be outside federal jurisdiction have been in effect since May 19, 2004.

CALIFORNIA DEPARTMENT OF FISH AND GAME (CDFG)

CDFG jurisdictional areas are determined utilizing California Fish and Game Code Section 1602 which requires that general plans be submitted to the California Department of Fish and Game (Department) if the project will (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the Department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, (2) use material from the streambeds designated by the department, or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake designated by the Department.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow

that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses should be treated by [CDFG] as natural waterways...
- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions.

For the development of this document, a systematic approach was taken to identify and characterize biological resources, including vegetation community types, and special status plant and animal species in the project area. The biological resource study area is defined as the area either directly or indirectly impacted by the project. Records of known occurrences were reviewed to identify those plant and wildlife species that may occur in the project area. Those records were then compared with federal or state listed threatened, endangered, or special status species. General biological surveys; vegetation mapping; and surveys for special status wildlife and plant species for the project were conducted. Methods that were used during these surveys are summarized by resource type in the following sections.

RECORDS SEARCH

Preliminary investigations included review of information obtained from the USFWS, and CDFG; literature searches; examination of aerial photographs; and database searches including California Native Plant Society (CNPS), the California Natural Diversity Data Base (CNDDB) records, and sensitive species accounts for Orange County. Reviewed environmental documents included Environmental Impact Reports prepared for other projects in the vicinity. A list of special status species was compiled, including all species in the project area that were:

- Listed as endangered or threatened, proposed for listing, or candidates for listing under the Federal Endangered Species Act (FESA);
- Listed as endangered or threatened, or candidates for listing under the California Endangered Species Act (CESA);
- Included in one of the CDFG publications on species of special concern;
- "Fully protected" by the State of California;
- Included in the CNPS compilation ; or
- Identified as plants meeting the definition of rare or endangered under CEQA.

The information provided by these agencies included both regional and site-specific data on sensitive species. These species are listed in Table 2.

BIOLOGICAL SURVEYS

Baseline biological studies of the proposed project were conducted in April 2008. Existing biological data was collected using Personal Computers (PCs) and Geographic Positioning System (GPS). This allowed for data to be collected in real time. Data layers uploaded onto these PCs included recent aerial photography, and topographic contours. Biological data was mapped onto the aerial photograph layers as polygon, line, and point attributes.

Checklists of biological information were uploaded onto the PCs, which allowed us to accurately label all data points, ensure consistency, and keep a running electronic account of all species encountered during the surveys. Finally, these checklists allowed for the inclusion of supplemental field notes, most notably, ranking of the quality of the various habitats including dominant and associate species for each vegetation polygon; assessing habitats for the potential presence of sensitive species not observed during the surveys; and identifying areas that would require protocol-level sensitive species surveys (i.e., USFWS protocol-level surveys for federal threatened and endangered species.

Habitats for specific species of wildlife and plants identified during surveys were classified as: not expected, low, moderate, high, or expected. These classifications were based on the quality of the habitat for each species and the proximity of the habitat to a known occurrence of a species obtained from CNDDB data. The definitions of each of the classifications are as follows:

- Not Expected: Species not previously reported in the vicinity of the site, and suitable habitat very marginal due to disturbances, fragmentation, and/or isolation.
- Low: Species previously reported from the vicinity of the site, but suitable habitat is marginal due to disturbances, fragmentation, and/or isolation.
- Moderate: Species previously reported from the vicinity of the site, and large areas of contiguous high-quality habitat present; or species previously reported in the vicinity of the site, but suitable habitat quality is moderate due to disturbances, fragmentation, and/or isolation.
- High: Species previously reported from regional vicinity of the site, and large areas of contiguous high-quality habitat are present.
- Expected: Species previously reported from very close vicinity of the site, and large areas of contiguous high-quality habitat are present.

VEGETATION METHODS

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries.

WETLANDS AND AQUATIC RESOURCES METHODS

General wetland assessments of the proposed project site were conducted which included general mapping of habitat(s) that may be subject to jurisdiction of the ACOE pursuant to section 404 of the Clean Water Act and the CDFG pursuant to sections 1600-12 of the California Fish and Game Code. The estimated limits of ACOE jurisdictional wetlands and waters of the United States was generally based on section B "Preliminary Data Gathering and Synthesis" of the ACOE 1987 *Wetlands Delineation Manual* (ACOE Manual). Routine or comprehensive formal determinations and delineations pursuant to sections D and E of the ACOE Manual were conducted.

A brief assessment of the wetland/riparian jurisdictional communities encountered was also conducted which described the dominant and associate plant species of each community and the presence and/or absence of visual field indicators (e.g., dominance of hydrophytic species, presence of drift lines).

WILDLIFE SURVEY AND HABITAT ASSESSMENT METHODS

General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plant, wildlife, and aquatic species. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements. The surveys coincided with the period during which many wildlife species, including migratory species, would have been most detectable. A faunal inventory of all species observed during the course of the surveys was also prepared.

SPECIAL STATUS SPECIES METHODS

Special Status Rare Plant Species Survey Methods

Information on special status rare plant species within the project area was gathered from several sources including California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2008), CNDDB (CNDDB 2008), and CalFlora (CalFlora 2008). Maps depicting all known sensitive plant species locations within the project area were produced to aid in determining the target species for survey. General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plants. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements.

Sensitive plant surveys of the project area were conducted in May, June and July 2008 and April, May, June, July and August 2009. This time period corresponds to the time during which most ephemeral spring annuals and herbaceous perennials, especially sensitive plant species, in Orange County would be most detectable. Focused rare plant level surveys were conducted, and no sensitive plant species were located. Sensitive species that were not observed due to unusual climate patterns but potentially could occur within the project area were also documented. The likelihood of these species occurrence (expected, high, moderate, low, or not expected) was also assessed.

A floral inventory of all species observed during the course of the surveys was also documented.

Special Status Wildlife Species Survey Methods

Prior to conducting habitat assessment surveys, the CNDDB and other sources were reviewed for the records of special status wildlife species potentially occurring in the project area. General reconnaissance and habitat assessment surveys were conducted to assess the presence of special status wildlife species habitats within the project area. Maps depicting

all known sensitive plant species locations within the regional vicinity of the project were produced to aid in determining the target species to survey.

All wildlife species encountered during surveys were documented. Any specific areas (e.g., potential nesting, breeding, and foraging habitat) encountered during the surveys that have a high probability for supporting sensitive wildlife were documented. The likelihood of these species occurrence (not expected, low, moderate, high, expected) was also assessed.

General habitat assessments and focused protocol-level surveys for other species including, but not limited to: coastal California gnatcatcher, least Bell's vireo and southwestern willow flycatcher; Plant Species including Many-stemmed dudleya, were also conducted. General habitat assessments involved evaluating the specific vegetation communities encountered and their potential to support these sensitive species (expected, high, moderate, low, not expected).

SURVEYS

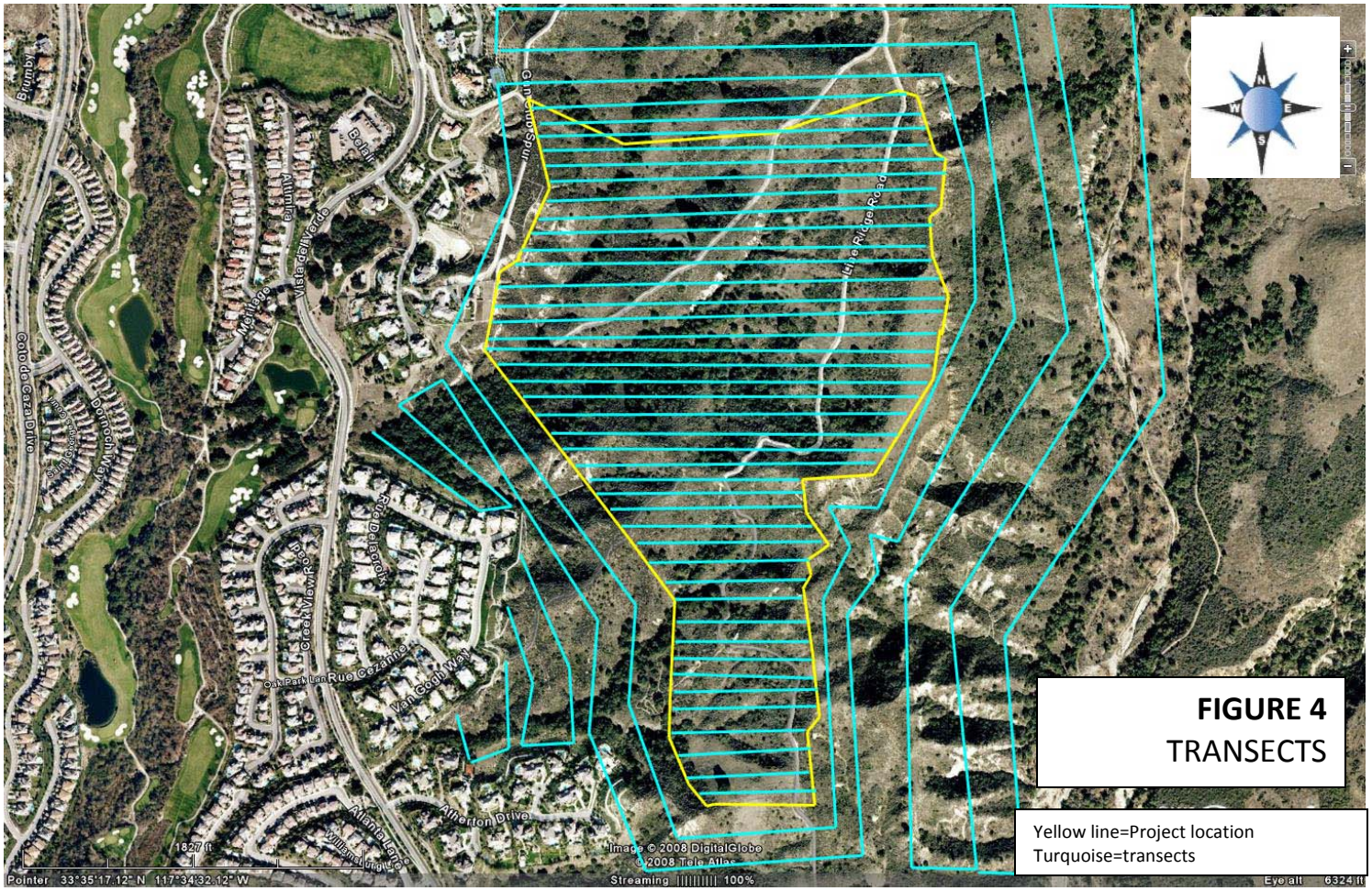
Based on the findings of the biological surveys, focused habitat assessment and species-specific surveys were scheduled for coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and Many-stemmed dudleya, to determine presence of sensitive, listed, and covered species within the project area. A complete floristic survey of the project area, as required in a complete CEQA analysis, was conducted in May, June and July 2008 to determine whether listed or special status plant species or sensitive plant communities occur. The listed and special status plant surveys followed protocols recommended in the USFWS, CDFG, and CNPS guidelines for rare plant surveys. All plants encountered were identified to a level necessary to ensure detection of covered or special status species. Through consultation with state and federal agencies, protocol-level wildlife surveys were conducted during the appropriate survey periods. The list of target species were developed using habitats identified in the biological surveys and areas of known and potential occupation. The results of these surveys are attached as Biological Technical Reports.

The following table identifies the sensitive species for which protocol-level surveys were required for the project.

TABLE 1
PROTOCOL SURVEYS

Protocol Surveys			
Species		**Survey Protocol**	**Location**
Scientific Name	**Common Name**		
Polioptila californica californica	Coastal California gnatcatcher	From February 15 and August 30, a minimum of three (3) surveys shall be conducted at least one week apart, to determine presence/absence of coastal California gnatcatchers. Whenever possible, additional surveys should be conducted.	Sage scrub and chaparral
Dudleya multicaulis	Many-stemmed dudleya	Surveys during flowering period of May & J u n e in appropriate habitat	Clay soils in barrens, rocky places, and ridgelines as well as thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands on clay soils.

Transects for general reconnaissance and habitat assessment surveys were conducted to assess the presence of special status wildlife and plant species habitats within the project area. Please see Figure 3. Survey information is included in Table 2.



Please note that this is an approximate locality map, and should not be used for calculations

TABLE 2

SURVEY SUMMARY

Survey Summary Coastal California Gnatcatcher

Date	Air Temp (F)	Wind Speed (mph)	Cloud Cover	Precipitation	Time
April 14, 2009	58-63	4	Clear	None	9:00 AM – 11 AM
April 18, 2009	60-75	1	Clear	None	7:00 AM – 11 AM
April 29, 2009	59-63	4	Clear	None	8:00 AM – 11 AM
May 9, 2009	62-74	2	Clear	None	7:30 AM – 10 AM
May 15, 2009	61-71	2	Clear	None	7:30 AM – 11 AM
May 29, 2009	60-68	6	Clear	None	6:45 AM – 11 AM
June 5, 2009	58-63	6	Clear	None	6:30 AM – 11 AM
June 19, 2009	58-72	1	Clear	None	7:00 AM – 10:30 AM
June 29, 2009	62-72	3	Clear	None	6:40 AM – 11:10 AM
July 14, 2009	62-72	3	Clear	None	6:30 AM – 10:30 AM
July 28, 2009	62-76	2	Clear	None	6:15 AM – 10:30 AM
August 7, 2009	58-75	6	Clear	None	6:00 AM – 10 AM
August 21, 2009	63-70	3	Clear	None	6:00 AM – 10 AM
August 30, 2009	64-79	0	Clear	None	6:00 AM – 10 AM

WETLANDS/STREAMBEDS

The proposed project has 2.11 acres of state jurisdictional oak woodland habitat. There are no wetlands on the project site.

SPECIES OF CONCERN

Current literature was reviewed to identify local occurrences and habitat requirements of special status species and communities occurring in the region. Literature reviewed included compendia provided by the resource agencies (CDFG 2001a, 2001b; USFWS 1999), California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik, 1994), and California Natural Diversity Data Base [NDDB] (2008) reports for the USGS Canada Gobernadora 7.5' minute topographic quadrangles. A search was made of the California Native Plant Society Electronic Database (CNPS 2008) to determine those plant species considered sensitive and known to occur within an approximately 10-mile radius of the subject property. Special status species information from standard reference works, field guides, existing literature, and unpublished reports were also included as part of the background research.

LITERATURE REVIEW

In addition to the efforts described above, standard reference works, field guides, existing literature, and unpublished reports were reviewed as part of the background research on general biological issues.

TABLE 3

RARE, THREATENED OR ENDANGERED SPECIES AND HABITATS IN CANADA GOBERNADORA QUADRANGLE

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	CALIF STATUS	CDFG	CNPS LIST
Bufo californicus	arroyo toad	Endangered	None	SC	
Spea hammondii	western spadefoot	None	None	SC	
Aquila chrysaetos	golden eagle	None	None		
Asio otus	long-eared owl	None	None	SC	
Empidonax traillii extimus	southwestern willow flycatcher	Endangered	Endangered		
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	None	None	SC	
Polioptila californica californica	coastal California gnatcatcher	Threatened	None	SC	
Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered		
Agelaius tricolor	tricolored blackbird	None	None	SC	
Gila orcuttii	arroyo chub	None	None	SC	
Myotis yumanensis	Yuma myotis	None	None		
Lasiurus blossevillii	western red bat	None	None	SC	
Antrozous pallidus	pallid bat	None	None	SC	
Eumops perotis californicus	western mastiff bat	None	None	SC	
Taxidea taxus	American badger	None	None	SC	
Phrynosoma coronatum (blainvillii population)	coast (San Diego) horned lizard	None	None	SC	
Aspidoscelis hyperythra	orange-throated whiptail	None	None	SC	
Thamnophis hammondii	two-striped garter snake	None	None	SC	
Crotalus ruber ruber	northern red-diamond rattlesnake	None	None	SC	
Branchinecta sandiegonensis	San Diego fairy shrimp	Endangered	None		
Streptocephalus woottoni	Riverside fairy shrimp	Endangered	None		
Pseudognaphalium leucocephalum	white rabbit-tobacco	None	None		2.2
Centromadia parryi ssp. australis	southern tarplant	None	None		1B.1
Caulanthus simulans	Payson's jewel-flower	None	None		4.2
Atriplex coulteri	Coulter's saltbush	None	None		1B.2
Dudleya multicaulis	many-stemmed dudleya	None	None		1B.2
Dudleya viscida	sticky dudleya	None	None		1B.2
Satureja chandleri	San Miguel savory	None	None		1B.2
Sidalcea neomexicana	Salt Spring checkerbloom	None	None		2.2
Nolina cismontana	Peninsular nolina	None	None		1B.2
Brodiaea filifolia	thread-leaved brodiaea	Threatened	Endangered		1B.1
Calochortus weedii var. intermedius	intermediate mariposa-lily	None	None		1B.2
Imperata brevifolia	California satintail	None	None		2.1
Valley Needlegrass Grassland	Valley Needlegrass Grassland				
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest				
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest				
Southern Mixed Riparian Forest	Southern Mixed Riparian Forest				
Southern Sycamore Alder Riparian	Southern Sycamore Alder				

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	CALIF STATUS	CDFG	CNPS LIST
Woodland	Riparian Woodland				

Legend:
CDFG=California Department of Fish and Game
SC=Species of Concern
CNPS List= California Native Plant Society
CNPS 1B= Rare or Endangered In California and Elsewhere
CNPS 2= Rare or Endangered in California, More Common Elsewhere
CNPS 3= Need More Information
CNPS 4= Plants of Limited Distribution

CNPS New Threat Code extensions and their meanings:
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

GENERAL DESCRIPTION OF THE SITE

The project site consists of gently to steeply sloping terrain that has a general decrease in elevation from east to west. The average annual rainfall for the area ranges from 12-20 inches. The average annual temperature is 59-62 degrees, with 200-350 frost-free days.[3] The project site is in the Santa Ana mountain foothills. The western boundary of the site consists of urbanized Coto de Caza, to the east is open space (Starr Ranch). The area supports chaparral, oak woodlands, grasslands, and coastal sage scrub. The Santa Ana Mountains are floristically distinct from the San Bernardino and San Jacinto Mountains.

SOILS OF THE SITE

The soil associations mapped for the area are the Cieneba-Anaheim-Soper association: Strongly sloping to very steep, somewhat excessively drained and well drained sandy loams, loams, clay loams, gravelly loams, and cobbly loams on coastal foothills. The soil series mapped for the area are described in Table 4. There no hydric soils listed for the area. The soils found are consistent with the soils mapped for the area.

3 United States Department of Agriculture Soil Conservation Service. 1978. Soil Survey of Orange County and Western Part of Riverside County, California. 149 pp.,illus.

TABLE 4

SOIL SERIES MAPPED FOR THE AREA

Symbol	Name	Description
132	BOTELLA CLAY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well-drained soils on alluvial fans. Slopes are 2-9%. These soils developed in sedimentary alluvium. Elevations range from 25-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual temperature is 62 degrees F, and the average frost-free season from 260-350 days. The vegetation is chiefly annual grasses, forbs, and some oak trees and brush.
133	BOTELLA CLAY LOAM, 9 TO 15 PERCENT SLOPES	The soils are made up of well-drained soils on alluvial fans. Slopes are 9-15%. These soils developed in sedimentary alluvium. Elevations range from 25-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual temperature is 62 degrees F, and the average frost-free season from 260-350 days. The vegetation is chiefly annual grasses, forbs, and some oak trees and brush.
134	CALLEGUAS CLAY LOAM, 50 TO 75 PERCENT SLOPES, ERODED	The soils are made up of well-drained soils on uplands, and have slopes of 50-75%. These soils formed in material weathered from lime coated shale or lime coated sandstone, or both. Elevations range from 200-2,500 feet. The average annual rainfall ranges from 13-20 inches, the average annual air temperature is 61 degrees F, and the average frost-free season from 300-350 days. The vegetation is mostly grasses, forbs, mostly mustard and brush.
135	CAPISTRANO SANDY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well drained soils. Slopes are 2-9%. These soils developed in granitic alluvium on alluvial fans and alluvial plains in small valleys of the Santa Ana Mountains and in sedimentary alluvium of the coastal foothills. Elevations range from 25-2,500 feet. The average annual rainfall ranges from 14-25 inches, the average annual air temperature is about 60 degrees F, and the average frost-free season from 240-340 days. The vegetation is mostly grasses.
141	CIENEBA SANDY LOAM, 15 TO 30 PERCENT SLOPES	The soils are made up of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 15-30%. Elevations range from 200-4,000 feet. The average annual rainfall ranges from 14-25 inches, the average annual temperature from 59-62 degrees F, and the average frost-free season from 200-340 days. The vegetation is mostly brush.
142	CIENEBA SANDY LOAM, 30 TO 75 PERCENT SLOPES, ERODED	The soils are made up of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 30-75%. Elevations range from 200-4,000 feet. The average annual rainfall ranges from 14-25 inches, the average annual temperature from 59-62 degrees F, and the average frost-free season from 200-340 days. The vegetation is mostly brush.
169	MODJESKA GRAVELLY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well-drained soils on terraces. These soils developed in mixed alluvium. Slopes are 2-9%. Elevations range from 200-1,500 feet. The average annual rainfall ranges from 14-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 280-330 days. The vegetation is annual grasses, forbs, and some brush along terrace breaks.

Symbol	Name	Description
171	MODJESKA GRAVELLY LOAM, 15 TO 30 PERCENT SLOPES	The soils are made up of well-drained soils on terraces. These soils developed in mixed alluvium. Slopes are 15-30%. Elevations range from 200-1,500 feet. The average annual rainfall ranges from 14-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 280-330 days. The vegetation is annual grasses, forbs, and some brush along terrace breaks.
175	MYFORD SANDY LOAM, 9 TO 15 PERCENT SLOPES	The soils are made up of moderately well drained soils on marine terraces. These soils developed in sandy sediments. Slopes are 9-15%. Elevations range from 50-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 270-350 days. The vegetation is annual grasses, and forbs, and scattered low growing brush.
192	ROCK OUTCROP-CIENEBA COMPLEX, 30 TO 75 PERCENT SLOPES	Rock outcrop consists of large exposures of sandstone or granite and boulders. Found in mountains or on foothills. It is 50% or more Rock outcrop and boulders and 50 % or less Cieneba soils. The soils are somewhat excessively drained. They formed in material weathered from granitic or sandstone rock. Slopes are 30-75%. Elevations range from 200-4,500 feet. The average annual rainfall ranges from 14-25 inches, the average annual air temperature is 59-62 degrees F, and the average frost-free season from 200-350 days.
200	SOPER LOAM, 30 TO 50 PERCENT SLOPES	The soils are made up of moderately well drained soils on foothills. These soils developed in weakly consolidated sandstone and conglomerate. Slopes are 30-50%. Elevations range from 200-2,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 270-350 days. The vegetation is sage, cactus, and brush, and in some areas an understory of annual grasses and forbs.

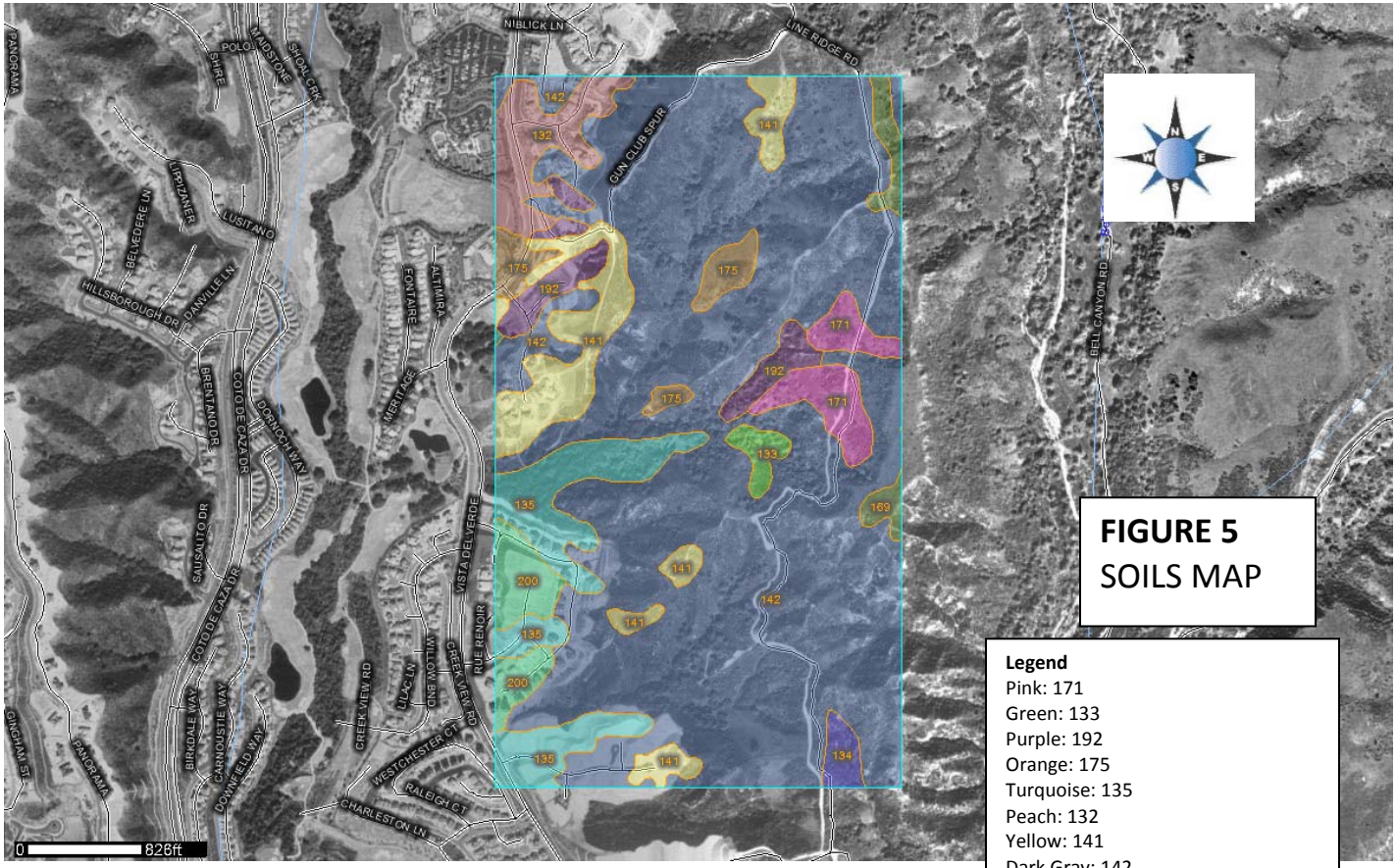


FIGURE 5
SOILS MAP

Legend
Pink: 171
Green: 133
Purple: 192
Orange: 175
Turquoise: 135
Peach: 132
Yellow: 141
Dark Gray: 142
Dark Green: 169
Light Green: 200

Source: Orange County and Western Part of Riverside County, California. Soil Data Version 4, Jan 3, 2008
Please note that this is an approximate locality map, and should not be used for calculations

PLANT COMMUNITIES

Sensitive Vegetation Communities

Sensitive vegetation communities are those that are: considered sensitive pursuant to the State of California NCCP program; are under the jurisdiction of the ACOE pursuant to Section 404 of the CWA; are under the jurisdiction of the CDFG pursuant to Sections 1600 through 1612 of the California Fish and Game Code; are known or believed to be of high priority for inventory in the California Natural Diversity Data Base (CNDDB 2008); are considered regionally rare in southern California; have undergone a large- scale reduction from their Pre-European coverage in southern California due to increased urban and agricultural encroachment; and/or support sensitive plant and animal species.

Sensitive vegetation communities listed for the surrounding project area are:
Southern Coast Live Oak Riparian Forest, Southern Coastal Salt Marsh, Southern Cottonwood Willow Riparian Forest, Southern Dune Scrub, Southern Foredunes, Southern Mixed Riparian Forest, Southern Riparian Scrub, Southern Sycamore Alder Riparian Woodland, and Valley Needlegrass Grassland.

Vegetation Communities on the Project Site

The project site is comprised of coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas. Residential areas consisting of medium density single family homes occur west of the project site. Both unnamed drainages drain into the residential area. In addition to the residential areas noted as Developed on the vegetation community map, disturbed areas also occur throughout the project site. Starr Ranch lies on the east side of the project site.

COASTAL SAGE SCRUB

Coastal sage scrub is represented by several major associations that occur discontinuously from the San Francisco Bay area south to El Rosario in Baja California, Mexico. Coastal sage scrub is dominated by a characteristic suite of low-statured, aromatic, drought- deciduous shrubs and subshrub species. Composition varies substantially depending on physical circumstances and the successional status of the vegetation community. Characteristic species include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), California encelia (*Encelia californica*), and several species of sage (*e.g., Salvia mellifera, Salvia apiana*) (Holland). Other common species include brittlebush (*Encelia farinosa*), lemonadeberry (*Rhus integrifolia*), sugarbush (*Rhus ovata*), Mexican elderberry (*Sambucus mexicana*), sweetbush (*Bebbia juncea*), boxthorn (*Lycium* spp.), prickly-pear (*Opuntia littoralis*), coastal cholla (*Opuntia prolifera*), tall prickly-pear (*Opuntia oricola*), and several species of live forever (*Dudleya*).

The more open nature of the canopy permits persistence of a diverse herbaceous component of forbs, grasses, and succulents in mature stands than usually is associated with chaparral. It often is mixed with chaparral and grassland communities and the distinct

boundaries between each can sometimes be difficult to delineate (Draft NCCP).

ANNUAL (NON-NATIVE) GRASSLAND

Non-native grassland is characterized by a sparse to dense cover of annual grasses typically up to two feet tall, with many annual wildflowers also present in years with favorable rainfall. This vegetation community typically occurs on fine-textured soils that are moist or wet in the winter and very dry during summer and fall. Plant species present typically include wild oat (*Avena* spp.), bromes (*Bromus* spp.), tarweeds (*Centromadia* spp., *Deinandra* spp.), and filarees (*Erodium* spp.) (Holland 1986). In Orange County, annual grasslands often occur where the native habitat has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities. Annual grasslands in the project area are dominated by bromes (*Bromus madritensis*, *Bromus diandrus, and Bromus hordaceous*), wild oats (*Avena barbata, Avena fatua*), rat-tail fescue, barleys (*Hordeum* spp.) and Italian ryegrass. Annual forbs include tocalote, common fiddleneck (*Amsinckia menziesii*), popcornflower (*Plagiobothrys* spp.), black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), common catchfly, stickwort (*Spergularia arvensis*), miniature lupine (*Lupinus bicolor*), white-whorl lupine (*Lupinus densiflorus var. austocollium*), burclover (*Medicago polymorpha*), bristled clover (*Trifolium hirtum*), red- stemmed filaree, white-stemmed filaree (*Erodium moschatum*), and fluellin (*Kickxia elatine*).

VALLEY NEEDLEGRASS GRASSLAND

Valley needlegrass grassland is a mid-height (to 2 feet) grassland dominated by perennial, tussock-forming purple needlegrass (*Stipa pulchra*). Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover. Usually on fine-textured (often clay) soils, moist or even waterlogged during winter, but very dry in summer. Often intergrades with oak woodlands on moister, better drained sites (Holland). In the project area valley needlegrass grassland is determined when there is more than 10 percent cover of purple needlegrass (*Nassella pulchra*). It is associated with the annual grasses listed above, leafy bentgrass (*Agrostis pallens*), junegrass (*Koeleria macrantha*), cane bluestem (*Bothriochloa barbiodis*), coast range melic (*Melica imperfecta*) and annual forbs such as common goldenstar (*Bloomeria crocea*), blue dicks, Cleveland's goldenstar (*Dodecatheon clevelandii*), smooth cat's-ear (*Hypocharis glabra*), lilac mariposa lily (*Calochortus splendens*), many-stemmed dudleya (*Dudleya multicaulis*), blue-eyed grass (*Sisyrinchium bellum*) and rosin weed (*Calycadenia truncata*)(Draft NCCP).

CHAMISE CHAPARRAL

Chamise chaparral is a 1-3 meter tall chaparral overwhelmingly dominated by chamise. Associated species contribute little to cover. It is adapted to repeated fires by stump sprouting. Mature stands are densely interwoven with very little herbaceous understory or litter. This chaparral is found on dry soils on xeric slopes and ridges. Some typical plant species include chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos glauca*), ceanothus (*Ceanothus cuneatus*), scrub oak (*Quercus dumosa*), sugar bush (*Rhus ovata*), white sage (*Salvia apiana*), and chaparral yucca (*Yucca whipplei*).

COAST LIVE OAK WOODLAND

Coast Live Oak Woodland is typically found on north-facing slopes and shaded ravines below 4000 feet. This oak woodland is dominated by the Coast Live Oak (*Quercus agrifolia*), which is evergreen and reaches 10-25 meters in height. The shrub layer is poorly developed, but may include Toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes spp.*), laural sumac (*Rhus laurina*), or elderberry (*Sambucus mexicana*). The herb layer is continuous and dominated by brome grass (*Bromus diandrus*) and several other non-native species. Other typical species include California buckeye *(Aesculus californica*), coffee berry (*Rhamnus californica*), poison oak (*Toxicodendron diversilobum*), California sagebrush (*Artemisia californica*), and California laurel (*Umbellularia californica*).

DISTURBED

The disturbed areas include all dirt roads located on the project site. Disturbed habitat refers to land that has been permanently altered by previous human activity that has eliminated all future biological value of the land for most species. The native or naturalized vegetation is no longer present and the land lacks habitat value for sensitive wildlife, including potential raptor foraging. This area has no habitat value.

TABLE 5
ACREAGE OF HABITAT TYPES ON THE PROJECT SITE

TYPE OF HABITAT	ACREAGE OF HABITAT IMPACTS (Acres)
Coastal sage scrub	66.67 acres
Annual (Non-native) grassland	23.26 acres
Valley needlegrass grassland	0.96 acre
Chaparral	7.26 acres
Coast Live Oak Woodland (Unnamed drainages and Engelmann Oak)	28.36 acres
Total	**126.51**

TENTATIVE TRACT 17325
VEGETATION IMPACT ANALYSIS EXHIBIT
FOR
KHALDA DEVELOPMENT
(COTO DE CAZA ESTATES)

ONSITE PERMANENT IMPACT VEGETATION TABULATION BLOCK

BIOLOGICAL AREAS	BASELINE ACREAGE	BASELINE ACREAGE PERCENTAGE OF PROJECT	PERMANENT IMPACT ACREAGE	PERMANENT IMPACT ACREAGE PERCENTAGE OF BASELINE	TEMPORARY IMPACT ACREAGE ✪	TEMPORARY IMPACT ACREAGE PERCENTAGE OF BASELINE ✪	FUEL MODIFICATION ACREAGE	FUEL MODIFICATION PERCENTAGE OF BASELINE	REMAINING ACREAGE	REMAINING ACREAGE PERCENTAGE OF BASELINE
ANNUAL GRASSLANDS	23.26 AC.	18.39%	0	N/A	0	N/A	0	N/A	23.26 AC.	100%
COASTAL SAGE SCRUB	66.67 AC.	52.7%	6.87 AC.	10.30%	0.92 AC.	1.38%	2.55 AC.	3.82%	56.33 AC.	84.49%
COASTAL LIVE OAK WOODLAND	28.36 AC.	22.42%	0.51 AC	1.80%	0.28 AC.	0.99%	0.13 AC.	0.46%	27.44 AC.	96.76%
VALLEY NEEDLEGRASS GRASSLAND	0.96 AC.	0.76%	0	N/A	0	N/A	0	N/A	0.96 AC.	100%
INTERMEDIATE MARIPOSA LILY	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CHAPARRAL	7.26 AC.	5.73%	0.91 AC.	12.53%	0.07 AC.	0.96%	0.98 AC.	13.50%	5.30 AC.	73%
TOTAL PROJECT AREA = ± 127 ACRES	126.51 AC.	100%	8.29 AC.	6.55%	2.60 AC.	2.06%	2.33 AC.	1.84%	113.29 AC.	89.55%

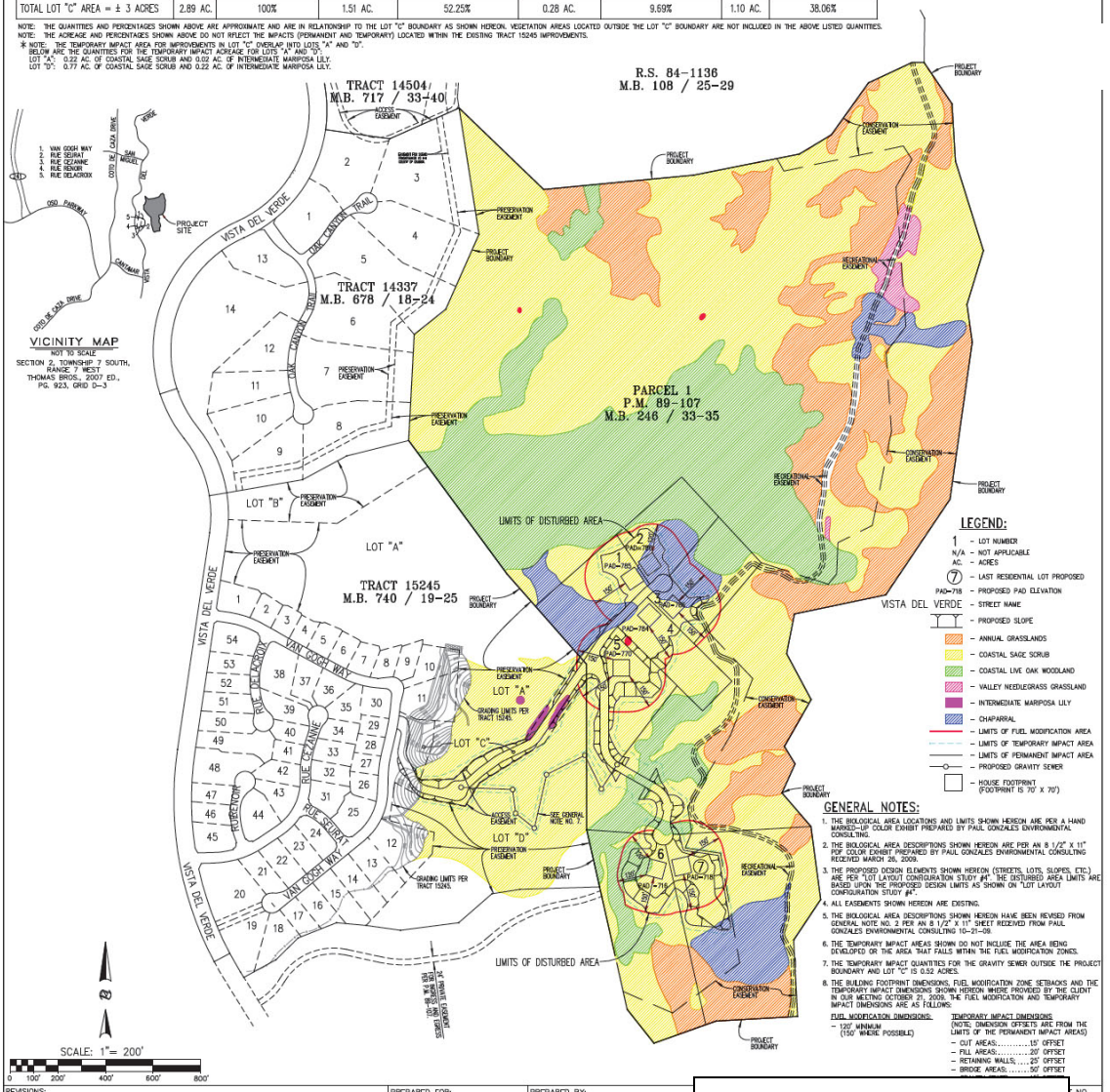
NOTE: THE QUANTITIES AND PERCENTAGES SHOWN ABOVE ARE APPROXIMATE AND ARE IN RELATIONSHIP TO THE PROJECT BOUNDARY AS SHOWN HEREON. VEGETATION AREAS LOCATED OUTSIDE THE PROJECT BOUNDARY ARE NOT INCLUDED IN THE ABOVE LISTED QUANTITIES.

✪ SEE GENERAL NOTE NO. 8.

LOT "C" PERMANENT IMPACT VEGETATION TABULATION BLOCK

BIOLOGICAL AREAS	BASELINE ACREAGE	BASELINE ACREAGE PERCENTAGE OF LOT "C"	PERMANENT IMPACT ACREAGE	PERMANENT IMPACT ACREAGE PERCENTAGE OF BASELINE	TEMPORARY IMPACT ACREAGE	TEMPORARY IMPACT ACREAGE PERCENTAGE OF BASELINE	REMAINING ACREAGE	REMAINING ACREAGE PERCENTAGE OF BASELINE
COASTAL SAGE SCRUB	1.65 AC.	57.09%	1.42 AC.	86.06%	0.22 AC.*	13.33%*	0.01 AC.	0.61%
INTERMEDIATE MARIPOSA LILY	0.15 AC.	5.19%	0.09 AC.	60.00%	0.06 AC.*	40.00%*	0 AC.	0%
TRACT 15245 LIMITS OF IMPROVEMENTS	1.09 AC.	37.72%	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL LOT "C" AREA = ± 3 ACRES	2.89 AC.	100%	1.51 AC.	52.25%	0.28 AC.	9.69%	1.10 AC.	38.06%

NOTE: THE QUANTITIES AND PERCENTAGES SHOWN ABOVE ARE APPROXIMATE AND ARE IN RELATIONSHIP TO THE LOT "C" BOUNDARY AS SHOWN HEREON. VEGETATION AREAS LOCATED OUTSIDE THE LOT "C" BOUNDARY ARE NOT INCLUDED IN THE ABOVE LISTED QUANTITIES.
NOTE: THE ACREAGE AND PERCENTAGES SHOWN ABOVE DO NOT REFLECT THE IMPACTS (PERMANENT AND TEMPORARY) LOCATED WITHIN THE EXISTING TRACT 15245 IMPROVEMENTS.
* NOTE: THE TEMPORARY IMPACT AREA FOR IMPROVEMENTS IN LOT "C" OVERLAP INTO LOTS "A" AND "D".
BELOW ARE THE QUANTITIES FOR THE TEMPORARY IMPACT ACREAGE FOR LOTS "A" AND "D":
LOT "A": 0.22 AC. OF COASTAL SAGE SCRUB AND 0.02 AC. OF INTERMEDIATE MARIPOSA LILY.
LOT "D": 0.77 AC. OF COASTAL SAGE SCRUB AND 0.22 AC. OF INTERMEDIATE MARIPOSA LILY.



GENERAL NOTES:

1. THE BIOLOGICAL AREA LOCATIONS AND LIMITS SHOWN HEREON ARE PER A HAND MARKED-UP COLOR EXHIBIT PREPARED BY PAUL GONZALES ENVIRONMENTAL CONSULTING.
2. THE BIOLOGICAL AREA DESCRIPTIONS SHOWN HEREON ARE PER AN 8 1/2" X 11" PDF COLOR EXHIBIT PREPARED BY PAUL GONZALES ENVIRONMENTAL CONSULTING RECEIVED MARCH 26, 2009.
3. THE PROPOSED DESIGN ELEMENTS SHOWN HEREON (STREETS, LOTS, SLOPES, ETC.) ARE PER "LOT LAYOUT CONFIGURATION STUDY #4". THE DISTURBED AREA LIMITS ARE BASED UPON THE PROPOSED DESIGN LIMITS AS SHOWN ON "LOT LAYOUT CONFIGURATION STUDY #4".
4. ALL EASEMENTS SHOWN HEREON ARE EXISTING.
5. THE BIOLOGICAL AREA DESCRIPTIONS SHOWN HEREON HAVE BEEN REVISED FROM GENERAL NOTE NO. 2 PER AN 8 1/2" X 11" SHEET RECEIVED FROM PAUL GONZALES ENVIRONMENTAL CONSULTING 10-21-09.
6. THE TEMPORARY IMPACT AREAS SHOWN DO NOT INCLUDE THE AREA BEING DEVELOPED OR THE AREA THAT FALLS WITHIN THE FUEL MODIFICATION ZONES.
7. THE TEMPORARY IMPACT QUANTITIES FOR THE GRAVITY SEWER OUTSIDE THE PROJECT BOUNDARY AND LOT "C" IS 0.52 ACRES.
8. THE BUILDING FOOTPRINT DIMENSIONS, FUEL MODIFICATION ZONE SETBACKS AND THE TEMPORARY IMPACT DIMENSIONS SHOWN HEREON WHERE PROVIDED BY THE CLIENT IN OUR MEETING OCTOBER 21, 2009. THE FUEL MODIFICATION AND TEMPORARY IMPACT DIMENSIONS ARE AS FOLLOWS:

FUEL MODIFICATION DIMENSIONS:
- 100' MINIMUM (150' WHERE POSSIBLE)

TEMPORARY IMPACT DIMENSIONS (NOTE: DIMENSION OFFSETS ARE FROM THE LIMITS OF THE PERMANENT IMPACT AREAS)
- CUT AREAS:.....15' OFFSET
- FILL AREAS:.....20' OFFSET
- RETAINING WALLS:....25' OFFSET
- BRIDGE AREAS:.....50' OFFSET

REVISIONS:			PREPARED FOR:	PREPARED BY:	NO.
DELTA	DATE	DESCRIPTION	KHALDA DEVELOPMENT, INC. 22861 TINDAYA MISSION VIEJO, CALIFORNIA 92692	CSL ENGINEERING, 11651 STERLING AVENUE, SUITE E RIVERSIDE, CALIFORNIA 92503 (951) 785-5122 • FAX (951) 785-5188	

FIGURE 6
VEGETATION MAP

SENSITIVE PLANT SPECIES

A list of special status plant species was created based on published literature and literature readily available on the internet, CNDDB records searches, state and federal species lists, and habitat field surveys. Each species, its status, habitat requirements, and the potential of occurrence in the project area are discussed below. Potential occurrences are presented for the proposed project.

Although several special-status plant species have the potential to occur on-site, we did not detect any during our site assessment. Table 6 documents the special-status plant species that may occur in the Canada Gobernodora quadrangle (Rarefind 3- 2008). Focused surveys for special status species were conducted during the general biological surveys; it is highly unlikely that any of those species are present on the project site.

TABLE 6

SPECIAL-STATUS PLANT SPECIES LISTED FOR CANADA GOBERNADORA QUADRANGLE

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/ Life Form	Status Onsite or Potential to Occur
Pseudognaphalium leucocephalum	white rabbit-tobacco	None	2.2	Sandy or gravelly slopes, stream bottoms, arroyos, areas of oak-sycamore, oak-pine, to pine woodlands, commonly in riparian vegetation; 0-492 feet	Not observed during flowering period. Medium potential.
Centromadia parryi ssp. australis	southern tarplant	None	1B.1	Marshes and swamps (margins);Valley and foothill grassland (vernally mesic);Vernal pools; 0-427 meters	Not observed during flowering period. Low potential.
Caulanthus simulans	Payson's jewel-flower	None	4.2	open dry areas of western Riverside Co., eastern Peninsular Ranges, western edge Sonoran Desert	Not observed during flowering period. Low potential.
Atriplex coulteri	Coulter's saltbush	None	1B.2	Usually occurs in non-wetlands, but occasionally found on wetlands. Found in dunes, coastal areas; coastal strand, valley grassland, coastal sage scrub.	Not observed during flowering period. Low potential.
Dudleya multicaulis	many-stemmed dudleya	None	1B.2	Openings in Sage Scrub and Valley Grasslands	Present
Dudleya viscida	sticky dudleya	None	1B.2	Found on coastal bluffs and inland rocky slopes in Chaparral, Coastal Sage Scrub.	Not observed during flowering period. Low potential.
Satureja chandleri	San Miguel savory	None	1B.2	Chaparral and oak woodland habitat and may be restricted to gabbroic or metavolcanic derived soils.	Not observed during flowering period. Low potential.
Sidalcea neomexicana	Salt Spring checkerbloom	None	2.2	Playas; Creosote Bush Scrub, Chaparral, Yellow Pine Forest, Coastal Sage Scrub, Alkali Sink, wetland-riparian	Not observed during flowering period. Low potential.
Nolina cismontana	Peninsular nolina	None	1B.2	Xeric Diegan Sage Scrub and open chaparral	Not observed during flowering period. Low potential.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE	1B.1	Vernal pools; Valley Grassland, Foothill Woodland, Coastal Sage Scrub, Freshwater Wetlands, wetland-riparian	No suitable habitat or soils; not expected.
Calochortus weedii var. intermedius	intermediate mariposa-lily	None	1B.2	Chaparral, Valley Grassland, Coastal Sage Scrub	Not observed during flowering period on the project site-two small populations found immediately adjacent to project site. High potential.

Legend

FE: Federally-listed as endangered
SE: State-listed as endangered
FT: Federally-listed as threatened
ST: State-listed as threatened
SCE: State candidate for listing as endangered
SR: State rare

CNPS List= California Native Plant Society
CNPS 1B= Rare or Endangered In California and Elsewhere
CNPS 2= Rare or Endangered in California, More Common Elsewhere
CNPS 3= Need More Information
CNPS 4= Plants of Limited Distribution
CNPS New Threat Code extensions and their meanings:
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Big-leaved crownbeard: Big-leaved crownbeard (*Verbesina dissita*) is a CNPS 1B.1 perennial shrub or subshrub (Rare, threatened, or endangered in California). Found near the coastal region of California near shrubby coastal slopes and in coastal sage scrub (Jepson Manual 1993). Although there is appropriate habitat present, no Big-leaved crownbeard was located during surveys for the species. Therefore it has a medium potential of being present.

Blochman's dudleya: Blochman's dudleya (*Dudleya blochmaniae ssp. blochmaniae*) is a CNPS 1B.1 species (Rare, threatened, or endangered in California). Blochman's dudleya is a tiny corm-like sprouting perennial that grows in sandy openings in Diegan sage scrub near the coast. Proximity to the coast, or to areas with a strong coastal influence, seems to be a requirement for this species (Reiser, 1994). Although there is appropriate habitat present, no Blochman's dudleya was located during surveys for the species. Therefore it has a medium potential of being present.

California satintail: California satintail (*Imperata brevifolia*) is a CNPS 2.1 plant (Rare, threatened, or endangered in California, common elsewhere; seriously endangered in California) found in wet or dry soil of Chaparral, Coastal Sage Scrub, and Creosote Bush Scrub habitats (CalFlora 2008; CNPS 2008). Although there is appropriate habitat present, no California satintail was located during surveys for the species. Therefore it has a medium potential of being present.

California screw-moss: California screw-moss (*Tortula californica*) is a CNPS 1B.2 plant (Rare or Endangered in California and elsewhere; fairly endangered in California). This species is found in elevation between 33 and 328 feet. The species range includes Riverside, Kern and Modoc counties (CalFlora, 2008). Although there is appropriate habitat present, no California screw-moss has been located in Orange County and the moss was not located during surveys. Therefore it has a low potential of being present.

Chaparral ragwort: Chaparral ragwort (*Senecio aphanactis*) is a CNPS 2.2 plant (Rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California) is found in dry, alkaline flats of Central Western California, the South Coast of California, California's Channel Islands, and Baja Mexico (UCJepson 2008). There is no appropriate habitat at the project site and Chaparral ragwort was not found during surveys. Therefore it has no potential of being present on the project site.

Chaparral sand-verbena: Chaparral sand-verbena (*Abronia villosa var. aurita*) is a CNPS 1B.1 (Rare or Endangered in California and Elsewhere; Seriously endangered in California) plant. It is endemic to southern California and known from the head of the Coachella Valley to interior Riverside, Orange, and San Diego counties. Although there is appropriate habitat present, no Chaparral sand-verbena was located during surveys for the species. Therefore it has a low potential of being present.

Cliff spurge: Cliff spurge (*Euphorbia misera*) is a CNPS 2.2 plant (Rare, threatened, or endangered in California; common elsewhere). Cliff Spurge is an unusual shrub or sub-

shrub with white flowers that grows on sandy coastal bluffs. Cliff Spurge does not grow as well in inland areas with cold winters and hot summers. There is no potential for this plant in the study area due to there being no suitable habitat on site. Thus, it is not expected.

Coulter's saltbush: Coulter's saltbush (*Atriplex coulteri*) is native to California and is a CNPS 1B.2 species (Rare, threatened, or endangered in California and elsewhere; fairly endangered in California). It is found in Coastal Strand, Valley Grassland, Coastal Sage Scrub plant communities of sand dune and coastal habitat. Although there is appropriate habitat present, no Coulter's saltbush was located during surveys for the species. Therefore it has a low potential of being present.

Encinitas baccharis: Encinitas baccharis (*Baccharis vanessae*) is as CNPS 1B.1 shrub (endangered in California and threatened elsewhere). Encinitas baccharis is endemic to southern California and can be found in the south coast and peninsular ranges near San Diego. It has been found on loamy sand and course sandy loam in Torrey-pine forests and on sandstone found in chaparral. Although there is a small amount of appropriate habitat present, no Encinitas baccharis was located during surveys for the species. Therefore it has a low potential of being present.

Estuary seablite: Estuary seablite (*Suaeda esteroa*) is a CNPS 1B.1 species (endangered in California and threatened elsewhere). It is a perennial herb found in coastal regions from Southern California to Mexico. Estuary seablite lives in Salt Marsh and Wetland areas. There is no potential for this plant in the study area due to there being no suitable habitat on site. Thus, it is not expected.

Felt-leaved monardella: Felt-leaved monardella (*Monardella hypoleuca* ssp. *Lanata*) is a CNPS 1B.2 species (Rare or Endangered in California and elsewhere; fairly endangered in California). This species is found in chaparral and foothill woodlands. It has been documented in Orange and San Diego Counties (CalFlora, 2008). Although there is appropriate habitat present, no Felt-leaved monardella was located during surveys for the species. Therefore it has a medium potential of being present.

Hall's monardella: Hall's monardella (*Monardella macrantha* ssp. *Hallii*) is endemic to California and is a CNPS 1B.3 species (Rare, threatened, or endangered in California and elsewhere; not very threatened in California). It is located in chaparral, foothill woodlands, yellow pine forests, mixed evergreen forests, and valley grasslands. This species has been documented in Los Angeles, San Diego, Orange, Riverside, and San Bernardino counties (CalFlora, 2008). Although there is appropriate habitat present, no Felt-leaved monardella was located during surveys for the species. Therefore it has a medium potential of being present.

Heart-leaved pitcher sage: Heart-leaved pitcher sage (*Lepechinia cardiophylla)* is a CNPS 1B.2 Plant (Rare or Endangered in California and Elsewhere; Fairly endangered in California). Heart-leaved pitcher sage occurs in closed-cone coniferous forest, chaparral

and cismontane woodland at elevations of 550 to 1,370 meters (RCIP 2003). There is no potential for this species on the proposed project site as there is no appropriate habitat on the project site. It is not expected on the project site.

Intermediate mariposa lily: Intermediate mariposa lily (*Calochortus weedii var. intermedius*) is a federal species of special concern and a CNPS 1B.2 species (Rare or Endangered in California and Elsewhere; Fairly endangered in California). It is found in dry, rocky, open slopes, often in chaparral, coastal sage scrub, and grasslands. Although there is appropriate habitat present, no Intermediate species was located on the project site, however there were species found immediately adjacent to the project site. There are intermediate mariposa lilies located in the area that is proposed to be impacted by an access road to the project site. Therefore it has a high potential of being present.

La Purisima vigiera: La Purisima vigiera (*Viguiera purisimae*)is a shrub native to California, and is a CNPS 2.3 plant (Rare, threatened, or endangered in California, but common elsewhere; not very threatened in California). It is found at elevations between 1198 and 1394 feet (Calflora 2008). There is no potential for this species on the proposed project site as the preferred elevation range is outside of the project site. It is not expected on the project site.

Laguna Beach dudleya: Laguna Beach dudleya (*Dudleya stolonifera*) is a CNPS 1B.1 species (threatened in California and elsewhere). Laguna Beach dudleya is endemic to the coastline of Orange County California. Found on north facing cliffs and outcrops and below an elevation of 250 feet. There is no potential for this species on the proposed project site as the site is above 250 feet. It is not expected on the project site.

Lemon lily: Lemon lily (*Lillium parryi*) is a CNPS 1B.2 plant (Rare, threatened, or endangered in California and elsewhere; fairly endangered in California). Lemon lily requires moisture year-round and the distribution of this species is limited to the banks of seeps, springs and permanent streams higher than 1300 m above msl. Typical habitat consists of forested, shady stream banks within narrow canyon bottoms (RCIP 2003). There is no potential for this species on the proposed project site as the site is above 250 feet. It is not expected on the project site.

Little mousetail: Little mousetail (*Myosurus minimus ssp. apus*) is a CNPS 3.1 species (Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported; Seriously endangered in California). Vernal Pools are the habitat utilized by Little Mousetail. Typically this cryptic species grows in the deeper portions of vernal pool basins sprouting immediately after the surface water has evaporated. The stature of plants and population densities of *Myosurus minimus* change dramatically from wet to dry years (Reiser, 1994). There is no potential for this species on the proposed project site as there is no appropriate habitat. It is not expected on the project site.

Long-spined spineflower: Long-spined spineflower (*Chorizanthe polygonoides var. longispina*) is a CNPS 1B.2 plant species (Rare or Endangered in California and Elsewhere; Fairly endangered in California). Potential habitat is southern needlegrass grassland, and openings in coastal sage scrub and chaparral that occur on clay or rocky clay soils of the Altamont, Auld, Bosanko, Claypit, and Porterville series (RCIP, 2003). Although there is appropriate habitat present, no Long-spined spineflower was located on the project site, and there are no appropriate soils. Therefore it has a low potential of being present.

Many-stemmed dudleya: Many-stemmed dudleya (*Dudleya multicaulis*) is a CNPS 1B.2 species (Rare or Endangered in California and Elsewhere; Fairly endangered in California) and Federal Candidate of Special Concern. This small, vernal live-forever is often found on rocky outcrops and can be found with Coastal Sage Scrub, Chaparral and Needle Grass. **This species was found on the project site.**

Mesa horkelia: Mesa horkelia (*Horkelia cuneata* ssp. *Puberula*) is a CNPS 1B.1 plant (Rare or Endangered in California and Elsewhere; Seriously endangered in California). The primary habitat associated with this species is vernal pools, depressions and ditches in areas that once supported vernal pools below 2000 feet. There is no potential for this species on the proposed project site. It is not expected on the project site.

Mud nama: Mud nama (*Nama stenocarpum*) is a CNPS 2.2 species (Rare, threatened, or endangered in California, common elsewhere; fairly endangered in California). It is an annual plant found in muddy places below 1000 feet. The species occurs from Los Angeles to Baja California. There is no potential for this plant in the study area due to there being no suitable habitat on site. Thus, it is not expected.

Munz's onion: Munz's onion (*Allium munzii*) is a federally endangered species, state threatened species, and a California CNPS 1B.1 plant (Rare or Endangered in California and Elsewhere; Seriously endangered in California). Grassy openings in coastal sage scrub, chaparral, juniper woodland, valley and foothill grasslands in clay soils. Found on mesic exposures or seasonally moist microsites. Associated with a special "clay soil flora" found in southwestern Riverside County that includes herbs such as chocolate lily (*Fritillaria biflora*), Palmer's grappling hook (*Harpagonella palmeri*), knot-weed spine flower (*Chorizanthe polygonoides ssp. longispina*), snakeroot (*Sanicula bipinnatifida, S. arguta*), lomatium (*Lomatium utriculatum*, *L. dasycarpum*), shooting stars (*Dodecatheon clevelandii*), bloomeria (*Bloomeria crocea*), soaproot (*Chlorogalum parviflorum*), many-stemmed dudleya (*Dudleya multicaulis*) and red-skinned onion (*Allium haematochiton*). At least one population (Bachelor Mountain) is reported to be associated with pyroxenite outcrops instead of clay (RCIP, 2003). Although there is appropriate habitat present, no Munz's onion was located during surveys for the species. Therefore it has a medium potential of being present.

Nuttall's scrub oak: Nuttall's scrub oak (*Quercus dumosa*) is a CNPS 1B.1 species (Rare or Endangered in California and Elsewhere; Seriously endangered in California). The

habitat for Nuttall's scrub oak includes sandy soils near the coast, chaparral, sand-stone and coastal sage scrub. Nuttall's scrub oak occurs below 600 feet elevation (CalFlora, 2008). Although there is appropriate habitat present, no Nuttall's scrub oak was located during surveys for the species. Therefore it has a medium potential of being present.

Orcutt's brodiaea: Orcutt's brodiaea (*Brodiaea orcuttii*) is a CNPS 1B, and Federal Species of Special Concern. This is another brodiaea with similar habitat requirements to the thread-leaved brodiaea. Currently, in Riverside and San Bernardino Counties, this species is only known to occur on the Santa Rosa Plateau and at Arrowhead Springs (base of the San Bernardino Mountains). The survey found no suitable habitat for *B. orcutti* in the project study area; thus, the species is not expected. There is no potential for Orcutt's brodiaea on the project site.

Orcutt's pincushion: Orcutt's pincushion (*chaenactis glabriuscula var. orcuttiana*) is endemic to California alone and is a CNPS 1B.1 species (Rare or Endangered in California and Elsewhere; Seriously endangered in California). Orcutt's pincushion occurs between 0 and 328 feet. It has been documented in Ventura, Los Angeles, Orange, and San Diego counties (CalFlora, 2008). There is no potential for this plant in the study area due to the site being outside of the elevation range of the plant. Thus, it is not expected.

Parry's spineflower: Parry's spineflower (*Chorizanthe parryi var. parryi*) is CNPS 3.2 (Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported; Fairly endangered in California). This small, white-flowered spine flower is found in the openings of chaparral, sage scrub, alluvial fan sage scrub and Juniper woodland. It is known to occur in Los Angeles, San Bernardino and Riverside Counties, principally in alluvial fan areas along the San Gabriel and San Bernardino Mountains, and in Riversidian sage scrub/chaparral habitats in the inland Riverside area (Hickman 1993). Although there is appropriate habitat present, no Parry's spineflower was located during surveys. It has a low potential of being present on the project site.

Parry's tetracoccus: Parry's tetracoccus (*Tetracoccus dioicus*) is a CNPS 1B.2 plant (Rare or Endangered in California and Elsewhere; Fairly endangered in California). The habitat for Parry's tertracoccus includes dry stony slopes and chaparral up to 2,500 feet. This plant has been documented in Orange, Riverside and San Diego Counties (CalFlora, 2008). Although there is appropriate habitat present, no Parry's tetracoccus was located during surveys for the species. Therefore it has a medium potential of being present.

Payson's jewel-flower: Payson's jewel-flower (*Caulanthus simulans*) is a CNPS 4.2 plant (limited distribution, watch list; fairly endangered in California). It is found in open, dry areas of California's eastern South Coast (western Riverside Co.), eastern Peninsular Ranges, and the western edge of the Sonoran Desert (UCJepson 2008). There is low potential for this plant to occur within the study area. This species was not located during the field surveys.

Peninsular nolina: Peninsular nolina (*Nolina cismontane*) is a CNPS 1B.2 (Not threatened, rare, or endangered in California and can be found elsewhere in the U.S). This species of shrub or sub-shrub is found on rocky slopes or ridges. There is low potential for this plant to occur within the study area. This species was not located during the field surveys.

Prostrate navarretia: Prostrate navarretia (*Naverretia prostrata*) is a CNPS 1B.1 plant (Rare or Endangered in California and Elsewhere; Seriously endangered in California). This species is associated primarily with vernal pools, depressions, and ditches in areas that once supported vernal pools below 2,000 feet. There is no potential for this species on the proposed project site, as there is no appropriate habitat. It is not expected on the project site.

Rainbow manzanita: Rainbow manzanita (*Arctostaphylos rainbowensis*) is a California species of special concern and a CNPS 1B.1 species. It is restricted to chaparral, principally on soils rich in ferro-magnesian minerals, found in southwestern Riverside County, south of Pauba Valley, and northwestern San Diego County, north of the San Luis Rey River. The potential for this plant in the study area is considered low, due to absence of suitable soils on the project site. Thus, it is not expected.

Ramona horkelia: Ramona horkelia (*Horkelia truncata*) is a CNPS 1B.3 plant (Rare, threatened or endangered in California and elsewhere; not very threatened in California). Ramona horkelia can be found on dryish slopes from 2,000 – 4,000 feet elevation, in chaparral and southern oak woodland habitats. This plant has only been documented in San Diego County (CalFlora, 2008). There is no potential for this species on the proposed project site, as the project site is outside of the known elevational range of the species. It is not expected on the project site.

Robinson's pepper-grass: Robinson's pepper-grass (*Lepidium virginicum var. robinsonii*) is a CNPS 1B.2 plant (Rare or Endangered in California and Elsewhere; Fairly endangered in California). Uncommon plant found in coastal sage scrub, chaparral, dry soils up to 1,500 foot elevation from Los Angeles County south. The blooming period is from January to April. Although there is appropriate habitat present, no Robinson's pepper-grass was located during surveys for the species. Therefore it has a medium potential of being present.

Round-leaved filaree: Round-leaved filaree (*Erodium macrophyllum*) is a CNPS 1B.1 plant (Rare or Endangered in California and Elsewhere; Seriously endangered in California). This annual typically grows in Valley and Foothill Grasslands in open habitat on friable clay soils. Round-leaved filaree is apparently well distributed in central and northern California, but is very rare in Southern California. Round-leaved filaree is presumed to be declining in Southern California due to loss of its friable clay microhabitat. All populations in Southern California are recommended for protection despite the sizeable populations to the north. Oftentimes, the distinctive clay soils where this species can occur include other sensitive species such as *Convolvulus*

simulans. The very crumbly clay soil is itself quite rare in the region and undoubtedly accounts for the rarity of several species restricted to this substrate (Reiser 1994). Although there is appropriate habitat present, no Round-leaved filaree was located during surveys for the species. Therefore it has a medium potential of being present.

San Bernardino aster: San Bernardino aster (*Symphyotrichum defoliatum*) is endemic to California and is a CNPS 1B.2 species (Rare or Endangered in California and Elsewhere; Fairly endangered in California). This species habitat includes cismontane woodlands, coastal sage scrub, lower montane coniferous forests, meadows, seeps, marshes, swamps, valleys and foothill grasslands (CNPS, 2008). Although there is appropriate habitat present, no San Bernardino aster was located during surveys for the species. Therefore it has a medium potential of being present.

San Diego button-celery: San Diego button-celery (*Eryngium aristulatum var. parishii*) is a state and federal endangered species. San Diego button-celery occurs only in vernal pools with clay soils. Some clay soils occur within the study area but no habitat for this species was noted during the field surveys; thus, it has low potential of occurring on the project site.

San Miguel savory: San Miguel savory (*Satureja chandleri)* is a CNPS 1B.2 species. It is a small herbaceous shrub found in chaparral and oak woodland, and may be restricted to gabbroic or metavolcanic derived soils. On McGinty Peak the soils are mapped as Las Posas stony fine sandy loam; San Miguel-Exchequer rocky silt loam is found on San Miguel Mountain. In mesic, shaded locations on the latter site, San Miguel Savory becomes lanky; on nearby xeric slopes it is typically stunted. Open Chamise dominated slopes seem to be a preferred microhabitat in San Diego County and northern Baja California, while Santa Ana Mountain reports note more mesic situations. Although there is appropriate habitat present, no San Miguel savory was located during surveys for the species. Therefore it has a medium potential of being present.

Salt Spring checkerbloom: Salt Spring checkerbloom (*Sidalcea neomecicana*) is a CNPS 2.2 species (Plants are rare, threatened, and endangered in California, more common elsewhere in the U.S). Salt Spring checkerbloom occurs in Creosote Bush Scrub, Chaparral, Yellow Pine Forest, Coastal Sage Scrub and Alkali Sink habitats. Although it usually occurs in wetlands it can occasionally be found in non wetland areas (CalFlora, 2008). Although there is a small amount of appropriate habitat present, no Salt Spring checkerbloom was located during surveys for the species. Therefore it has a low potential of being present.

Santa Monica dudleya: Santa Monica Dudleya (*Dudleya cymosa ssp. ovatifolia*) is a CNPS 1B.2 perennial forb/herb mainly found in the Santa Monica and Santa Ana Mountains (Rare or Endangered in California and Elsewhere; Seriously endangered in California). The Santa Monica dudleya is found in chaparral and can also be located in deep canyon bottoms typically on hard rock surfaces. There is low potential for this plant to occur

within the study area, as suitable habitat is present. This species was not located during the field surveys.

Santiago Peak phacelia: Santiago Peak phacelia (*Phacelia suaveolens ssp. Keckii*): This plant is a CNPS 1B.3 species (Rare, threatened, or endangered in California and elsewhere; not very threatened in California). It is found in the chaparral zone of coastal mountains, canyons, and rocky slopes. Although there is appropriate habitat present, no Santiago Peak phacelia was located during surveys for the species. Therefore it has a medium potential of being present.

Slender-horned spineflower: The Slender-horned spineflower (*Dodecahema leptoceras*) is a CNPS 1B.1 species (Rare or Endangered in California and Elsewhere; Seriously endangered in California), Federal and State Endangered species. This very small annual spineflower occurs in alluvial washes. It is usually restricted to old bench habitats in Riversidian alluvial fan sage scrub, and it is usually found in open sandy areas associated with leathery spine flower (*Chorizanthe coriacea*) and loeflingia (*Loeflingia squarrosa*). The species is known from the Santa Ana River, in the vicinity of Redlands. It is also historically known from the upper Cajon Wash, although these populations cannot be re-located. Currently, no populations are known to occur in the area. There is no potential for this species on the project site. It is not expected on the project site.

Smooth tarplant: Smooth tarplant (*Centromadia pungens ssp. Laevis*) is a CNPS 1B.1 species (Rare or Endangered in California and Elsewhere; Seriously endangered in California). It is found along the coast and on alkaline soils at the edges of marshes and swamps. The species occurs from Southern California to Baja California. There is no potential for this plant in the proposed project area due to there being no suitable habitat on site. Thus, it is not expected.

South Coast saltscale: South coast saltscale (*Atriplex pacifica*) is a federal species of special concern and a CNPS 1B.2 species (Rare, threatened, or endangered in California and elsewhere; fairly endangered in California). It is found along sea bluffs in coastal bluff scrub and coastal scrub from Los Angeles to Baja California. Although there is appropriate habitat present, no South coast saltscale was located during surveys for the species. Therefore it has a medium potential of being present.

Southern tarplant: (*Centromadia parryi ssp. Australis*) Southern tarplant is a CNPS 1B.1 species. It is found along the coast and on alkaline soils at the edges of marshes and swamps. The species occurs from Southern California and Baja California. There is no potential for this plant in the study area due to there being no suitable habitat on site. Thus, it is not expected.

Sticky dudleya: Sticky dudleya (*Dudleya viscida*) is endemic to California alone and is a CNPS 1B.2 species (Rare, threatened, and endangered in California and elsewhere; fairly threatened in California). Sticky dudleya is a perennial herb that can be found in dry rocky places below 1,200 feet elevation, bluffs and coastal sage scrub. This species has

been documented in Los Angeles, San Diego, Orange, and Riverside counties (CalFlora, 2008). Although there is appropriate habitat present, no Sticky dudleya was located during surveys for the species. Therefore it has a low potential of being present.

Summer holly: Summer holly (*Comarostaphylis diversifolia ssp. diversifolia*) is a CNPS 1B.2 species (Rare, threatened, and endangered in California and elsewhere; fairly threatened in California). Summer holly is shrub found in chaparral habitat. It has been documented in Orange and San Diego counties (CalFlora, 2008). Although there is appropriate habitat present, no Summer holly was located during surveys for the species. Therefore it has a low potential of being present.

Tecate cypress: Tecate cypress (*Cupressus forbesii*) is a CNPS 1B.1 species (Rare or Endangered in California and Elsewhere; Seriously endangered in California). It is a small evergreen tree with forked trunk and irregular, spreading crown. Tecate cypress is found in the chaparral zone of coastal mountains, canyons, and rocky slopes. Current known locations are in Southwestern California (Orange and San Diego counties) and nearby Baja California. Tecate cypress is found between 2,000-4,000 feet. Although the habitat is similar, the elevation on the project site is not appropriate. During surveys the species was not located. Therefore it has no potential of being present.

Thread-leaved brodiaea: Thread-leaved brodiaea (*Brodiaea filifolia*) is endemic to California alone, is a federal threatened species, is a California endangered species, and is a CNPS 1B.1 plant (Rare, threatened, or endangered in California and elsewhere; seriously endangered in California). It is found in Valley Grassland, Foothill Woodland, Coastal Sage Scrub, and Freshwater Wetland plant communities in vernal-pools habitat. It is equally likely to occur in wetlands or non wetlands (CalFlora 2008). There is low potential for this plant in the study area due to there being no alkali flats on site. Thus, it is not expected.

White rabbit-tobacco: White rabbit-tobacco (*Pseudognaphalium leucocephalum*) is a perennial herb native to California and a CNPS 2.2 species (Rare, threatened, or endangered in California, but common elsewhere; fairly threatened in California). It can be found in Chaparral, Cismontane woodland, Coastal scrub, and Riparian woodland plant communities (CNPS, 2008). Although there is appropriate habitat present, no White rabbit-tobacco was located during surveys for the species. Therefore it has a medium potential of being present.

WILDLIFE

Wildlife usage of the project site is substantial. The project site is surrounded on three sides by open space. Residential housing is located to the west. Dogs, horses, and people roam freely throughout the area. The presence of free-ranging pets may have suppressed populations of ground-dwelling organisms.

AMPHIBIANS

Five special-status amphibians are listed for the project quadrangles (Rarefind 3- 2008). In the subsection below, we discuss the amphibian species that have been documented in the vicinity of the project site:

Arroyo toad: The Arroyo toad (*Bufo californicus*) is a federal endangered species and a state species of Special Concern. The arroyo toad is a relatively small (2-3 inches snout-vent length) toad. Its coloration ranges from olive green or gray to light brown. This toad prefers riparian habitats with sandy streambeds that have cottonwood, sycamore, and willow trees. Some populations occur in streams within coniferous forests. The stream setting usually has adjacent shallow pools where the toad may sit in the water while partially exposed above (USFWS 2005). There is no potential for this species on the proposed project site, as there is no suitable habitat.

Coast range newt: The Coast range newt (*Taricha torosa torosa*) is a state Species of Special Concern. Typically found in quiet streams, ponds, and lakes and surrounding evergreen and oak forests along the coast. Although there is appropriate habitat present (oak woodlands), no Coast range newt was located during surveys for the species. Therefore it has a low potential of being present.

Coronado skink: The Coronado skink (*Eumeces skiltonianus interparietalis*) is a federal and state Species of Special Concern. This small lizard inhabits mesic environments including grasslands, scrublands, woodlands and higher altitude coniferous forests. It prefers areas near water. Although there is appropriate habitat present, no Coronado skink was located during surveys for the species, nor are any of the areas near water. Therefore it has a low potential of being present.

Western spadefoot toad: The Western spadefoot toad [*Spea (=Scaphiopus*) *hammondi*] is a federal and state species of special concern. It occurs in coastal sage scrub, chaparral and grassland habitats. It is typically found along sandy washes, on floodplains and in low hills. Temporary breeding pools are a crucial requirement for its continued occupation of an area. There is low potential for this species on the proposed project site, as no temporary breeding pools were located during the surveys. This species was not located during the field surveys.

REPTILES

Several special-status reptile species are listed for the project quadrangles (Rarefind 3 - 2008). Most of these species occupy scrub communities. In the subsection below we discuss the reptile species that have been documented in the vicinity of the site.

Coast patch-nosed snake: The coast patch-nosed snake (*Salvadora hexalepis virgultea*) is a federal Species of Special Concern. This snake is found primarily in sage scrub and chaparral communities. The coast patch-nosed snake was not observed during field

surveys, but may occur on the project site as suitable habitat is present. It has high potential for being present on the project site.

Coastal Western Whiptail: The coastal whiptail (*Cnemidophorus tigris multiscutatus*) is a federal species of concern. It occurs in relatively undisturbed open scrub habitats throughout the region. It is a relatively common lizard species in the region. Although there is appropriate habitat present, no Coastal Western Whiptail was located during surveys for the species. Therefore it has a medium potential of being present.

Northern red-diamond rattlesnake: The red-diamond rattlesnake (*Crotalus ruber ruber*) is a federal and state listed Species of Special Concern. It is found in the surrounding area and on the project site.

Orange-throated whiptail: The orange-throated whiptail (*Cnemidophorus hyperythrus*) is a federal and state Species of Special Concern. The orange-throated whiptail has similar habitat requirements as the coastal whiptail, occurring in open scrub and woodlands with an ample invertebrate prey base. Although there is appropriate habitat present, no Orange- throated whiptail was located during surveys for the species. Therefore it has a high potential of being present.

Rosy boa: The Rosy boa (*Charina trivirgata*) is a heavy-bodied snake with smooth shiny scales and a blunt, but tapered tail. This species inhabits arid scrublands, semi-arid shrublands, rocky deserts, desert oases, canyons, and rocky areas. It appears to be common in riparian areas, but does not require permanent water (USGS, 2003). The Rosy boa has a medium potential to occur on the site, however it was not seen on the site during surveys.

San Diego Mountain King snake: The San Diego Mountain King snake (*Lampropeltis zonata pulchra*) is a state species of special concern. This snake inhabits moist woods from sea level to extremely high elevations. In the southern portion of their range, the California Mountain King snake is not found near the coast, instead preferring coniferous forests and woodlands above 3,000 feet. This species appears to prefer rocky areas, but also is found beneath logs and under bark. There is no potential for this species on the proposed project site, as there is no appropriate habitat on the project site.

San Diego banded gecko: The San Diego banded gecko (*Coleonyx variegatus abbotti*) is a federal Species of Special Concern that occurs in sage scrub and chaparral. This lizard typically inhabits areas with rock outcrops and is found beneath exfoliating rock. The San Diego banded gecko has a medium potential to occur on the site, however it was not seen on the site during surveys.

San Diego horned lizard: The San Diego horned lizard (*Phrynosoma coronatum blainvillei*) is a federal and state Species of Special Concern. Typically occurring in grassland and scrub habitats with suitable basking sites and ample numbers of ant prey,

this lizard usually occupies habitats that have open basking areas and loose soil for burrowing. The San Diego horned lizard is considered at-risk due to conversion of natural areas to agriculture and development, and the spread of non-native Argentine ants into Southern California (Stebbins 2003). The San Diego horned lizard has a medium potential to occur on the site, however it was not seen on the site and was not located during surveys.

San Diego ringneck snake: San Diego ringneck snake (*Diadophis punctatus similis*) is a small, thin snake with gray, blue-gray, blackish or dark olive dorsal coloring. The San Diego ringneck snake can be found in San Diego County along the coast and into the Peninsular range, and southwestern San Bernardino County. The habitat for this species includes wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests and woodlands (CaliforniaHerps, 2006). The San Diego ringneck has a medium potential to occur on the site, however it was not seen on the site and was not located during surveys.

Southwestern pond turtle: The southwestern pond turtle (*Clemmys marmorata pallida*) is a California species of special concern. It inhabits slow moving permanent or intermittent streams, small ponds, small lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and sewage treatment lagoons. Logs, rocks, submerged vegetation; mud, undercut banks, and ledges are necessary habitat components for cover as well as a water depth greater than 2 meters. Sunning sites, emergent vegetation, and suitable terrestrial shelter characterize optimal habitat (RTIP 2003). Habitat for the southwestern pond turtle is not present on the site, and this species has no potential to occur on the project site.

Two-striped garter snake: The Two-striped garter snake (*Thamnophis hammondi*) is a federal and state species of special concern. It occurs primarily along permanent streams, although it also may occur in association with vernal pools or intermittent creeks. It has been found considerable distances from water sources in chaparral or other habitat types. The species occurred in the Santa Ana River basin in the past; however, no post-80's records are known in the area (Jennings 2004). It has very likely been extirpated due to human disturbance, pollution, and the introduction of predatory non-native fish and the voracious bullfrog. Although potential habitat for this species is present (chaparral and sage scrub), it was not located during surveys, and has low potential of being present.

BIRDS

Several bird species have been documented in the vicinity of the project site (Rarefind 3-2008). These species occupy a variety of vegetation communities including scrub, grassland, and other open habitat types. In the subsection below we discuss the special-status bird species that have been documented in the vicinity of the site.

Burrowing owl: The burrowing owl (*Speotyto cunicularia*) is a federal and state listed Species of Special Concern, and U.S. Fish and Wildlife Service Migratory Nongame Bird of Management Concern. Burrowing owls historically occurred throughout much of California; however, many former populations have vanished. The burrowing owl is a yearlong resident that inhabits open habitats, primarily grasslands and deserts. Burrowing owls require a burrow for roosting and nesting cover. Although they usually nest in abandoned ground squirrel burrows, they will also use other small mammal burrows, pipes, culverts, and nest boxes, particularly where burrows are scarce (Zeiner et al. 1990). Small rodent burrows were located in the study area. No signs of burrowing owls were observed at the burrows or adjacent to them. There is medium potential for this species on the proposed project site, as there is suitable habitat.

California Horned lark: The California Horned lark (*Eremophila alpestris actia*) is a California species of special concern. The horned lark is a common to abundant resident in a variety of open habitats, usually where trees and large shrubs are absent. In the Midwest, the species has been characterized as the most abundant species in row-crop fields. Range-wide, California horned larks breed in level or gently sloping shortgrass prairie, montane meadows, "bald" hills, opens coastal plains, fallow grain fields, and alkali flats. Within southern California, California horned larks breed primarily in open fields, (short) grasslands, and rangelands. Grasses, shrubs, forbs, rocks, litter, clods of soil, and other surface irregularities provide cover. The site provides suitable habitat for this species, although the species was not observed during surveys. There is medium potential for this species on the proposed project site, as there is suitable habitat.

Coastal Cactus Wren: The San Diego cactus wren (*Campylorhynchus brunneicapillus*) is a federal species of special concern. It is common resident of cactus patches in sage scrub stands in the region of the project. Cactus habitat for this species is present within the study area. The site does provide suitable habitat for this species, although the species was not observed during surveys. The cactus wren has a high potential of being present on the project site.

Coastal California gnatcatcher: There are three subspecies of California gnatcatchers. The Coastal California gnatcatcher (*Polioptila californica californica*) subspecies is listed as Threatened under the Federal Endangered Species Act, and it is listed in the MSHCP as a Planning Species for Elsinore. This small, insectivorous songbird occurs almost exclusively in several distinctive subassociations of the coastal sage scrub plant community (USFWS 1993). There is habitat suitable for the species. **Four pairs of Coastal California gnatcatcher were found on the project site.**

Cooper's hawk: Cooper's hawk (*Accipiter cooperii*) is a California Species of Special Concern. It is a bird of woodland areas, especially dense stands of live oak and riparian vegetation. It typically nests in second-growth conifers or in deciduous riparian stands. Snags in edge areas and patchy woodlands are favorite perches. These accipiters are hunters of small birds, small mammals, reptiles, and amphibians. Males defend an area

with a radius of about 100 m around potential nest sites prior to nesting. Distance between nests ranges from 1.6-4.2 km. Home range estimates vary from 18-531 ha. Cooper's hawks breed from March through August, and generally produce a single brood of 4-5 eggs, with typical fledgling success of 2 young per pair annually (Zeiner et al. 1990). The Cooper's hawk has a medium potential to occur on the site, however it was not seen on the site and was not observed during surveys.

Ferruginous hawk: The ferruginous hawk (*Buteo regalis*) is a California Department of Fish and Game Species of Special Concern, and a U.S. Fish and Wildlife Service Bird of Conservation Concern. Unlike most other bird species, these agencies are concerned with conservation of the species on its wintering grounds. Ferruginous hawks do not breed in California, but they are common winter residents of grasslands and agricultural areas in southwestern California (Zeiner et al. 1990). The site may provide suitable foraging habitat for the species. It has a medium potential of being present on the project site. None were observed during surveys.

Golden eagle: The golden eagle (*Aquila chrysaetos*) is a California Department of Fish and Game Species of Special Concern, and a U.S. Fish and Wildlife Service Bird of Conservation Concern. These agencies are concerned with the year long (i.e., breeding and wintering) conservation of the species. Typical habitat of the golden eagles includes rolling foothills, mountain areas, sage-juniper flats, and deserts. Golden eagles nest on cliffs and in large trees in open areas (Zeiner et al. 1990). The site may provide suitable foraging habitat for the species. It has a medium potential of being present on the project site. None were observed during surveys.

Grasshopper sparrow: The Grasshopper sparrow (*Ammodramus savannarum*), a small sparrow found in grasslands with patches of bare ground, is a California species of special concern. California has both local breeding populations and migrating winter populations (Cornell Lab of Ornithology, 2008). The species was not observed during surveys, thus not expected at the project site. The Grasshopper sparrow has a medium potential to occur on the site, however it was not seen on the site and was not observed during surveys.

Least Bell's vireo: The least Bell's vireo (*Vireo bellii pusillus*) (LBV) is a federal and state endangered species. Preferred habitat conditions for this species include a dense undergrowth of young willows or mulefat, typically combined with an overstory of taller willows and associated with flowing water. Wider woodlands are more likely to harbor LBV than narrower ones (RCIP 2003). Focused surveys were conducted for the LBV and none were located during the surveys. There is low potential for LBV being present on the project site.

Long-eared Owl: The long-eared owl (*Asio otus*) is a state species of special concern. Long-eared Owls are medium-sized, nocturnal, woodland owls, with a broad distribution across North America, Eurasia and northern Africa. Long-eared Owls inhabit open woodlands, forest edges, riparian strips along rivers, hedgerows, juniper thickets,

woodlots, and wooded ravines and gullies. Breeding habitat must include thickly wooded areas for nesting and roosting with nearby open spaces for hunting. During winter, they need dense conifer groves or brushy thickets to roost in. Roosting sites are usually in the heaviest forest cover available. They will also roost in hedgerows, or in caves and cracks in rock canyons. Unlike most other Owls, during winter they may roost communally (7 to 50 Owls) in dense thickets and range over very large undefended foraging areas. Communal roost sites are often used year after year, probably by the same birds. They hunt mainly by ranging over open rangeland, clearings, and fallow fields. They rarely hunt in woodlands where they roost and nest. Long-eared Owls nest almost exclusively in old stick nests of crows, magpies, ravens, hawks, or herons. They nest rarely in rock crevices, tree cavities, or on open ground. Nests are almost always located in wooded sites, often screened by shrubbery, vines, or branches and are commonly 5 to 10 meters (16 to 33 feet) above ground (Owl Pages 2008). Suitable foraging habitat is present, although none were observed during surveys. There is medium potential for this species on the proposed project site, as there is suitable foraging habitat.

Northern harrier: The northern harrier (*Circus cyaneus*) is a state Species of Special Concern. Northern harriers prefer open habitat types and are seldom found in wooded areas. The species frequently nests in emergent wetlands or along rivers or lakes, but may also nest in grasslands, grain fields, or on sagebrush flats several miles from water (Zeiner et al. 1990). Northern harrier nest sites are typically located in large patches of habitat that are free from disturbance. The site does not providing suitable nesting habitat for the northern harrier; however, the species may use the site for foraging. There is medium potential for this species on the proposed project site, as there is suitable foraging habitat.

Southern California rufous-crowned sparrow: The Southern California rufous-crowned sparrow (*Aimophila ruficeps*) is a state Species of Special Concern. Rufous-crowned sparrows breed and feed on steep, dry, herbage-covered hillsides with scattered shrubs and rock outcrops (Zeiner et al. 1990). There is medium potential for this species on the project site however, none were observed during surveys.

Southwestern willow flycatcher: The Southwestern Willow Flycatcher (*Empidonax trailii extimus*) is a federal and state endangered species. This small flycatcher occurs throughout coastal southern California as an uncommon spring migrant and fairly common fall migrant, generally in riparian areas. Nesting is rare and very local in the region, and extensive willow-riparian woodlands are required. Found in wet meadows and montane riparian habitats from 610-2,500 meters (2,000-8,000 feet.) Willow flycatchers prefer dense willow thickets. They nest from May through June. Formerly, the species bred extensively throughout the region. Major declines in its preferred breeding habitat and brood parasitism by Brown-headed cowbird are believed to have precipitated its rapid decline this century. Focused surveys were conducted for the southwestern willow flycatcher and none were located during the surveys. There is low potential for southwestern willow flycatcher being present on the project site.

Tri-colored blackbird: The tri-colored blackbird (*Agelaius tricolor*) is a federal and state species of special concern. It is an uncommon to locally common species known from the area of the study area. The species typically requires freshwater marshes and ponds for nesting and adjacent or nearby fields for foraging. Where found, it can occur in colonies of several to many thousands of birds. There is no potential for this species on the project site, as there is no suitable habitat.

Western snowy plover: The western snowy plover (*Charadrius alecandrinus nivosus*) is a federal threatened species and a bird species of special concern in California. This species is a small shorebird distinguished from other plovers (family Charadriidae) by its small size, pale brown upper parts, dark patches on either side of the upper breast, and dark gray to blackish legs. The Pacific coast population of the western snowy plover breeds primarily on coastal beaches from southern Washington to southern Baja California, Mexico. The nesting season extends from early March through late September (USFWS). There is no suitable habitat on site or in adjacent areas. Therefore there is no potential for this species on the project site.

White faced ibis: The white faced ibis (*Plegadis chihi*) is a bird species of special concern in California. They are a small to medium-sized heron-like bird with long, decurved bills. The White faced ibis habitat includes bays, marshes, lakes, and ponds. This species breeds locally in western U.S., from South Texas through Mexico and along Pacific Coast to El Salvador, and locally in northern and south-central South America; winters from southwestern U.S. south through breeding range (Ryder, 1994). There is no suitable habitat on site or in adjacent areas. Therefore there is no potential for this species on the project site.

Yellow-breasted chat: The yellow-breasted chat (*Icteria virens*) is a California species of special concern. It is an uncommon local summer resident of well-developed riparian thickets in the region of the project. There is low potential for yellow-breasted chat being present on the project site, as there are no riparian thickets on the project site.

MAMMALS

Several special-status mammal species have been documented in the quadrangles surrounding the project site (Rarefind 3, 2008).

American badger: American badger (*Taxidea taxus*) is a California Species of Special Concern. Badgers prefer to live in dry, open grasslands, fields, and pastures. Males occupy larger home ranges than females (2.4 versus 1.6 square kilometers), but this species is not known to defend an exclusive territory. Badgers subsist on a diet of small mammals, birds, reptiles and arthropods. Unlike many carnivores that stalk their prey in open country, badgers catch most of their food by digging. They can tunnel after ground dwelling rodents with amazing speed. Badgers are important consumers of many small

prey items in their ecosystem. Also, their burrows provide shelter for other species. There is low potential for this species on the proposed project site.

Dulzura pocket mouse: The Dulzura pocket mouse (*Chaetodipus californicus femoralis*) is a California Species of Special Concern. The Dulzura pocket mouse habitat includes coastal sage scrub, chamise, redshank and montane chaparral, sagebrush, annual grassland, valley foothill hardwood, valley foothill hardwood-conifer, and montane hardwood habitats (Zeiner et al. 1990). There is suitable habitat for this species however none were found during surveys. There is high potential for the species on the project site.

Mexican long-tongued bat: The Mexican long-tongued bat (*Choeronycteris mexicana*) is a California Species of Special Concern. The Mexican long-tongued bat inhabits deep canyons using caves for day roosts. They feed on nectar and pollen from agaves and other plants. There is a low potential for this species on the project site and none were observed during surveys.

Northwestern San Diego pocket mouse: The Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) is a species of special concern. The northwestern San Diego pocket mouse inhabits coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities. It inhabits open, sandy areas of both the Upper and Lower Sonoran life-zones of southwestern California and northern Baja California. Bleich recorded the highest populations of the San Diego pocket mouse in coastal sage scrub supporting a mixture of coastal sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*) on the Naval Weapons Station, Fallbrook Annex in northwestern San Diego County, but it was also relatively abundant in chaparral. The San Diego pocket mouse generally exhibits a strong microhabitat affinity for moderately gravelly and rocky substrates, and, to a lesser extent, shrubby areas. In western Riverside County, the San Diego pocket mouse is also commonly found in disturbed grassland and open sage scrub vegetation with sandy-loam to loam soils (RCIP 2003). There is medium potential for this species on the proposed project site however none were found during surveys.

Pacific Pocket mouse: The Pacific Pocket mouse (*Perognathus longimembris pacificus*) is a federally endangered species and a California Species of Special Concern. They inhabit coastal sandy soils. There is low potential for this species on the project site, as there were no sandy soils on the project site.

Pallid Bat: The pallid bat (*Antrozous pallidus*) is a state species of special concern. It roosts in crevices in rocks, buildings and occasionally trees, and forages over a variety of habitat types. It is known to occur in the project study area, but was not detected during field surveys. Pallid bat has high potential for foraging on the project site.

Pocketed Free-tail Bat: Pocketed free-tail bat (*Nyctinomops femorasacca*) is a state species of special concern. It ranges from southern California to Baja California and

through southwestern Arizona into central Mexico. They are typically found in rocky, desert areas with relatively high cliffs. There is medium potential for this species on the proposed project site, as there is suitable habitat on the project site however, the species was not observed during surveys.

San Diego Desert woodrat: The San Diego Desert woodrat (*Neotoma lepida intermedia*) is a federal and state Species of Special Concern. It is a common inhabitant of sage scrub habitat in the region, often occurring in association with rock outcrops. There is high potential for this species on the proposed project site however none were observed during surveys.

Stephens' kangaroo rat: The Stephens' kangaroo rat (*Dipodomys stephensi*) is a federal endangered and state threatened species. The Stephens' kangaroo rat is found almost exclusively in open grasslands or sparse shrublands with cover of less than 50% during the summer. O'Farrell further clarified this association and argues that the proportion of annual forbs and grasses is important because Stephens' kangaroo rats avoid dense grasses (for example, non-native bromes [*Bromus* spp.]) and are more likely to inhabit areas where the annual forbs disarticulate in the summer and leave more open areas. He also noted a positive relationship between the presence of the annual forbs red-stemmed filaree (*Erodium cicutarium*), grazing, and the Stephens' kangaroo rat (RCIP 2003). There is no potential for this species on the project site, as there is no suitable habitat on the project site. The Stephens' kangaroo rat was not observed during surveys.

Western mastiff bat: The western mastiff bat (*Eumops perotis californicus*) is a state species of special concern. Western mastiff bat is found in desert scrub, chaparral, mixed conifer forest, giant sequoia forests, and montane meadows. Because of its large wingspan, the western mastiff bat requires roosts that have at least 6.5 feet (2 meters) of free space to drop from to initiate flight. The species also requires large bodies of flat water for drinking sites. It's long, narrow wings preclude it from drinking at ponds less than 100 feet long (USFS). There is suitable habitat on the project site, however, none were found during surveys. Western mastiff bat has a medium potential for being on the project site.

Western red bat: Western red bat (*Lasiurus blossevillii*) is a species of special concern in California. Western red bat habitat includes broad-leafed woodlands, usually in riparian areas. Western red bat is typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores). Roost sites are generally hidden from view from all directions except below; lack obstruction beneath, allowing the bat to drop downward for flight; lack lower perches that would allow visibility by predators; have dark ground cover to minimize solar reflection; have nearby vegetation to reduce wind and dust; and are generally located on the south or southwest side of a tree (TPWD, 2005). There is suitable habitat on the project site (oak

woodlands), however, none were found during surveys. Western red bat has a medium potential for being on the project site.

Yuma Myotis: Yuma myotis (*Myotis yumanensis*) is a rare mammal. Its range extends throughout the western United States into Mexico. They are typically found in caves, tunnels, and buildings, in arid areas. They could feasibly roost in rock outcrops or immediately adjacent to the area; although the relatively small size of boulders in the study area reduce the likelihood of their being occupied by a maternity colony. There is no potential for this species on the proposed project site, as there is no appropriate habitat.

FISH

Arroyo chub: Arroyo chub (*Gila orcutti*) is a state species of special concern. The arroyo chub is adapted to surviving in the warm fluctuating streams of the Los Angeles Plain. They prefer slow moving or backwater sections of warm to cool streams with substrates of sand or mud (RCIP-2003). Arroyo chub does not occur on the site, as there is not a stream present. There is no potential for this species on the proposed project site, as there is no habitat.

Santa Ana speckled dace: Santa Ana speckled dace (*Rhinichthys osculus* ssp. *3*) is a state species of special concern. This species is endemic to the Los Angeles Basin south coastal streams (LADPW, 2006). There is no potential for this species on the proposed project site, as there is no habitat.

Southern Steelhead: Southern steelhead (*Oncorhynchus mykiss irideus*) are winter-run steelhead that persist in streams that have warm, dry lower reaches on the coastal plain. They are federally endangered and a state Species of Special Concern. There is no potential for this species on the proposed project site, as there is no habitat.

Tidewater goby: Tidewater goby (*Eucyclogobius newberryi*) is endemic to California, a Federal endangered species and a State species of special concern. Tidewater goby is a small, elongate, grey-brown fish rarely exceeding 50 millimeters (2 inches) standard length. It is characterized by large pectoral fins. Tidewater goby is found primarily in waters of coastal lagoons, estuaries, and marshes. Its habitat is characterized by brackish (somewhat salty) water in shallow lagoons and in lower stream reaches where the water is fairly still but not stagnant. Tidewater goby is the only species in the genus *Eucyclogobius* and is almost unique among fishes along the Pacific coast of the United States in its restriction to waters with low salinities in California's coastal wetland habitats (USFWS, 2005). There is no potential for this species on the proposed project site, as there is no habitat.

INSECTS

Monarch butterfly: The monarch butterfly (*Danaus plexippus*) is bright orange with black borders and black veins. The habitat for the monarch butterfly is a predominantly open country, frost intolerant species whose range of breeding habitats is greatly dependent upon the presence of asclepiad flora (milkweeds). The monarch requires dense tree cover for overwintering, and the majority of the present sites in California are associated with Eucalyptus trees, specifically the blue gum, *Eucalyptus globulus* (UMMOZ). There is no suitable habitat on the project site however, there is suitable habitat adjacent to the project site. There is low potential for the monarch butterfly to be breeding on the project site.

INVETEBRATES

Riverside fairy shrimp: Riverside fairy shrimp (*Streptocephalus woottoni*) is a federal endangered species. It is typically found in pools, ponds, and depressions that are deeper and cooler than the basins that support the related species, the endangered San Diego fairy shrimp (*Streptocephalus sandiegonensis*). The critical habitat includes Riverside fairy shrimp habitat throughout the species' range in the United States (*i.e.*, Los Angeles, Orange, Riverside, San Diego, and Ventura counties, California); and is generally based on the geographic location of vernal pools, soil types, and local variation of topographic position (*i.e.*, coastal mesas or inland valleys). The Riverside fairy shrimp does not occur on the project site due to the absence of suitable habitat.

San Diego fairy shrimp: San Diego fairy shrimp (*Streptocephalus sandiegonensis*) is a federal endangered species. It is typically found in pools, ponds, and depressions that are shallower and warmer than the basins that support the related species, the endangered Riverside fairy shrimp (*Streptocephalus woottoni*). The critical habitat includes Riverside fairy shrimp habitat throughout the species' range in the United States (*i.e.*, Los Angeles, Orange, Riverside, San Diego, and Ventura counties, California); and is generally based on the geographic location of vernal pools, soil types, and local variation of topographic position (*i.e.*, coastal mesas or inland valleys). The San Diego fairy shrimp does not occur on the project site due to the absence of suitable habitat.

WILDLIFE CORRIDORS

The basic framework of corridor analysis consists of identifying areas of habitat which are suitable for the wildlife species in question. Habitat suitability depends upon the needs of a given species. It can be approximated by overlaying layers such as current vegetation, topography (aspect, slope, elevation), distance to water, and perhaps climatic variables such as average temperature and precipitation. Because different wildlife species vary in their sensitivity to human disturbance, habitat suitability is constrained by disturbance variables such as distance to roads, distance to towns, traffic

volumes, hunting status, etc. Generally, a coverage of known distribution of a species (sightings, radio-telemetry locations, hunter-kill and road-kill sites) is also developed. A probability contour is finally developed from the convergence of these coverage's to indicate the likelihood of a given area being suitable for a given species. Where this probable habitat connects areas of known population centers, it is often termed a corridor. The project site is bordered by urban development to the west. The drainages may be used as corridors, as evidence of meso-predators was located within the drainage confines and along the dirt roads within the project site.

ORANGE COUNTY SOUTHERN SUBREGION NATURAL COMMUNITY CONSERVATION PLAN/MASTER STREAMBED ALTERATION AGREEMENT/HABITAT CONSERVATION PLAN

The Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP) sets forth a proposed Conservation Strategy that would be implemented by the County of Orange in cooperation with state and federal agencies and Participating Landowners in southern Orange County. The proposed NCCP/MSAA/HCP has a strong conservation component that should help protect threatened and endangered species in the future.

The Conservation Strategy consists of: 1) Creation of a permanent Habitat Reserve; 2) Formulation and implementation of a Habitat Reserve Management Program (HRMP); 3) Receipt of State and Federal regulatory coverage and provisions for the impacts of proposed Covered Activities on proposed Covered Species and California Department of Fish and Game (CDFG) Jurisdictional Areas; and 4) Execution of an Implementation Agreement (IA) and identification of funding necessary to implement the HRMP (Habitat Reserve Management Program). The Covered Activities consist of those lawful activities undertaken by the County of Orange, RMV, and the SMWD pursuant to the NCCP/MSAA/HCP.

RESERVE ASSEMBLY OBJECTIVES

This section of the report is intended to analyze the project's relationship to Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP). The overall goal of this section is to determine if the proposed project is consistent with the Reserve Assembly objectives for the NCCP/MSAA/HCP.

(1) Subarea 3

The subject property is in subarea 3. Subarea 3 is built out except for a few undeveloped private lots located within the Coto de Caza Planned Community, primarily along the northern edge. The project site lies within Linkage F. Linkage F is a "horseshoe" shaped corridor north of the Coto de Caza golf course that provides habitat and connectivity between Upper Chiquita Canyon and Starr Ranch and Casper's Wilderness Park. Although this linkage is fragmented, narrow (substantially less than the 2,000-ft-wide (600 m) Plan goal), and a patchy mosaic of CSS, it still supports many

gnatcatcher territories. The patchy CSS habitat also likely provides a route for gnatcatcher dispersal. South of Linkage F, some east-west movement of gnatcatchers may also occur across the Coto de Caza golf course from surrounding supplemental open space (SOS) lands in the vicinity of Via Ortega/Via Coyote. In this area, native scrub habitat that will remain undeveloped is immediately adjacent to either side of a narrow strip of the golf course.

Planning Species for which Habitat is provided within this Linkage include coastal California gnatcatcher and coastal cactus wren. Maintenance of a contiguous connection is important for these species. Management of edge conditions is required to provide movement of gnatcatchers through this Linkage. Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators are also required. Barriers, including roadways and fencing constructed as part of adjacent Development, may result in fragmentation of the Linkage and affect movement through the Linkage by gnatcatchers.

(2) Biological Objectives of Subarea 3

Coastal California Gnatcatcher:

The East Coto de Caza/Starr Ranch "important" population in a "key" location includes occurrences along the ridgeline between the Gobernadora and Bell Canyon sub-basins and the scattered occurrences east of northern Bell Canyon. This population of 52 locations provides dispersal habitat and potential refugia habitat for birds in Chiquita Canyon if a wildfire were to occur. It also provides a north-south linkage to other occupied habitat in Casper's Wilderness Park, including scattered locations west of San Juan Creek. 37 percent (19 of 52 locations) of the East Coto de Caza/Starr Ranch "important" population occurs on Starr Ranch.

Coastal Cactus Wren:

Linkage F is a "horseshoe" shaped corridor north of the Coto de Caza golf course that provides habitat and connectivity between Upper Chiquita Canyon and Starr Ranch and Casper's Wilderness Park. Although this linkage is fragmented, narrow (substantially less than the 2,000-ft-wide (610 m) Plan goal), and a patchy mosaic of CSS, it still supports many cactus wren territories. The patchy CSS habitat also likely provides a route for cactus wren dispersal. South of Linkage F, some east-west movement of cactus wrens may also occur across the Coto de Caza golf course from surrounding SOS lands in the vicinity of Via Ortega/Via Coyote. In this area, native scrub habitat that will remain undeveloped is immediately adjacent to either side of a narrow strip of the golf course.

Many-stemmed dudleya

Dudleya multicaulis, Many-stemmed dudleya, is known from coastal and foothill areas of Los Angeles, Orange, San Bernardino, western Riverside, and San Diego counties (Bartel 1993, California Natural Diversity Database 2004).

Distribution in the Planning Area

Within National Forest System lands, *Dudleya multicaulis* occurs on the Cleveland National Forest. Occurrence locations include the Santa Ana Mountains southwest of

Sierra Peak summit; the Santa Margarita Mountains along Indian Potrero Truck Trail; and the San Mateo Wilderness area in Oak Flats and along the Lucas Canyon Trail in Aliso Canyon. There are several occurrences recorded adjacent to the Angeles National Forest near San Dimas (California Natural Diversity Database 2004).

Taxonomy and Natural History

Dudleya multicaulis is a perennial succulent herb. Stems are corm-like, 1.5-5 cm long and 3-18 mm side, simple, and oblong. Leaves are 4-15 cm long, 2-6 mm wide, linear and cylindric (except at the base, 4-10 mm wide). Leaf tips are narrowly acute. The inflorescence has 2 to many primary branches that are simple or forked. Peduncles are 5-35 cm long, 2-4 mm wide, with terminal branches of 2-10 cm with 3-15 flowers having pedicels of 0-3 mm long. Sepals are 2-3 mm, deltate-acute. Petals are 5-9 mm and 2-3 mm wide, fused for 1-2 mm, elliptic-lanceolate, and acute. Fruits have spreading follicles (Bartel 1993). Plants flower from March to July having yellow flowers with red flecks (California Native Plant Society 2001).

This species forms vegetative parts and inflorescences aboveground each year during the rainy season (December-May), with the aboveground parts dying back in late spring, leaving just the dormant underground corm (Marchant and others 1998). It is pollinated by at least one bee species, and it may be capable of some self-pollination (Marchant and others 1998).

Habitat Description

Dudleya multicaulis occurs in clay soil and Cretaceous marine sediment in barrens, rocky places, or thinly vegetated openings in chaparral, coastal scrub, and valley and foothill grasslands at elevations of 50–2,590 feet (15–790 meters) (Bartel 1993, California Native Plant Society 2001). Majority of the population are associated with coastal sage or open coastal sage scrub. It is usually found in openings on dry, stony soils, often with high clay content (Stephenson and Calcarone 1999). Associated species *include Harpagonella palmeri*, *Allium munzii*, *Fritillaria biflora*, *Lupinus bicolor*, *Nassella pulchra*, *Eriogonum fasciculatum*, *Artemisia californica*, and *Juniperus californica*.

Occurrence Status

The California Natural Diversity Database (CNDDB) lists 113 occurrences for *Dudleya multicaulis*, 14 of which are presumed extirpated. The majority of the occurrences (71) are located on private lands (approximately 70% of extant occurrences). Some populations have over 10,000 plants (CNDDB Occ. #9, Estelle Mountain in Riverside County; CNDDB Occ. # 32, Christianitos Canyon in Orange County)(California Natural Diversity Database 2004). Most occurrences range from 25 to 400 to 1000 individuals per site. The remaining occurrences not on private lands are protected on State (University of California, Irvine, and California State Parks), Audubon Starr Ranch, County and City municipalities, and Camp Pendleton Marine Corps Base (Department of Defense). Occurrences on these protected sites have between 7 to over 2500 individuals per site. On National Forest System lands there are four occurrences on the Cleveland National Forest. One area with five *Dudleya multicaulis* was located in the zone of influence of the project.

(3) Conclusion:

The project site is within Subarea 3. The preservation of the affected acreage would contribute to the conservation, habitat, and species protection objectives of the NCCP/MSAA/HCP. Various alternatives are being examined in order to minimize and avoid impacts to sensitive species.

URBAN/WILDLANDS INTERFACE

The proposed project will incorporate design features and measures into the project plans to be consistent with the NCCP/MSAA/HCP pertaining to the Urban/Wildlands Interface.

Drainage

The project will incorporate project streets, open channels and natural drainage courses as well as a comprehensive system of underground storm drains to handle storm runoff from the project site. Storm water from the project site and off-site tributary areas will be directed to storm drains. The design and operation of the drainage channel shall be adequate to preclude discharge of water into open space areas that are of lower quality or higher quantity than current conditions. The proposed development shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the open space area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into open space areas. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within open space areas. This will be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

Toxics

The proposed project is designed to utilize natural drainage patterns for the flow of surface water. Water Quality Best Management Practices (BMPs) include the vegetated earthen channel within the project and other BMPs such as education, storm drain stenciling, and street sweeping. The earthen channel shall be signed to filter potential toxics in the storm water prior to its discharge into open space areas. These BMPs will be implemented as part of the storm water pollution prevention measures for the project, in accordance with all appropriate NPDES requirements.

The project would result in the additional use of hazardous materials in limited quantities associated with normal residential use such as cleaning products, solvents, herbicides, and insecticides. However, compliance with regulations will reduce the potential risk of hazardous material exposure to a level that is less than significant. An information pamphlet has been prepared for each homeowner regarding the use of toxics.

The existing equestrian trail will be maintained in place within the designated open space areas. Public access will be maintained. No additional public access, including trails, will be placed next to or within open space areas.

Lighting

Night lighting shall be directed away from open space areas to protect species within the area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the open space area is not increased. Outdoor lighting of residences will be designed so that all direct beams would be confined to dwelling sites. The level of of-site lighting and lighting fixtures would comply with the applicable requirements and policies of the County of Orange. Project lighting will not intrude into the open space conservation areas. Street lighting, parking lot lighting, and other project-related illumination sources will be positioned, directed, and shielded so as to avoid "light spill" into the conserved areas. The proposed project will avoid any night lighting adjacent to the open space areas. Night lighting will not be used during the course of construction unless absolutely necessary. If necessary, the lights will be directed and shielded to minimize lighting of the surrounding habitat.

Noise

The proposed project incorporates landscape elements including trees, shrubs, and groundcover, which will assist in noise reduction on the project site. No noise created on the project site would exceed residential noise standards.

Barriers

The proposed project will likely include walls and fencing located where public view and/or important interfaces are of concern. The project will incorporate special edge treatments designed to separate development areas from open space areas. These areas of native landscaping and fencing will serve to minimize unauthorized public access, domestic animals predation, and illegal trespass and dumping.

Exotic Vegetation Control

Design guidelines for the project will provide the homeowners with a list of native landscaping materials permitted within the project area. These materials have been selected for their contribution to the project theme, adaptability to local climatic and soil conditions, and for their compatibility with the unique natural environment in the project area. Sage scrub will be planted as appropriate on all manufactured slopes. In addition, restoration and enhancement of sage scrub and oak woodland species will be completed in designated conservation easement areas. The project will incorporate special edge treatments designed to separate development areas from open space areas. Landscape buffers would be incorporated into the project designs that minimize the intrusion of non-native plant species into natural areas. None of the plants listed in Section 7.16.2 of the Draft NCCP/MSAA/HCP will be utilized for the project and their use by future homeowners will be prohibited. A weeding program will be implemented if necessary and should follow the guidelines described below. Non-native plant removal strategies will be site-specific to take advantage of habitat breaks such as those created

by large shrub patches, rock outcrops, or roads so that patches of weeds can be effectively controlled. The entire site will be surveyed annually for the first five years for weed removal. Areas where weeding is necessary will contain a significant amount of invasive exotic species with the potential to spread throughout the area. Weed removal will be done by hand or through repeated herbicide applications. The non-native plant removal process must be carefully monitored because as the dominant non-native plant species are removed, other non-native plant species can multiply rapidly and replace the formerly dominant non-native species particularly in more disturbed sites. The Draft NCCP/MSAA/HCP has identified exotic invasive plants that should be removed from open space areas. This list is included on 7-206 of the Draft NCCP/MSAA/HCP.

Access

Open space areas will be retained as open space and will be managed for the sole purpose of wildlife conservation in perpetuity. The conservation easements will prohibit all activities that may kill, injure, or otherwise significantly disturb wildlife or adversely impact their habitat within the easement areas. These activities include, but are not limited to, recreation (hiking, biking, walking pets), agriculture, communication tower construction, gardening, dumping of garbage, off-road vehicle use, and construction of roads (other than the equestrian trail and project roads) or other structures.

Pets

Uncontrolled pets, feral dogs and cats can predate on native wildlife species. The following additional steps shall be taken to prevent the predation of native species by dogs and cats.

Appropriate signage will be posted, limiting and discouraging the use of the open space by hikers and their pets. Homeowner Educational pamphlets will be used to inform them of the potential impacts by uncontrolled pets on native habitats.

Grading/Land Development

All manufactured slopes that abut conservation easement areas will be retained as open space buffer zones. All manufactured slopes and areas disturbed by construction of these slopes will be revegetated with buffer species during project construction.

Based on the above analysis, the net project effects and appropriate recommendations are summarized below.

PROJECT EFFECTS

The number of individuals of each sensitive species inhabiting the habitat areas was not determined, for the following reasons: (a) many species are amphibians or reptiles, which are difficult to detect during routine field surveys, (b) intensive population studies of small mammals inhabiting the various habitats were not conducted due to the excessive time required to complete such investigations, and (c) some of the bird species known from habitats immediately adjacent to the project area were not observed during field surveys but, due to their capacity of flight, could inhabit the area any time in the future.

DIRECT AND INDIRECT IMPACTS TO WILDLIFE

This section addresses direct, indirect, and cumulative impacts to biological resources that may result from implementation of the proposed project.

Direct impacts generally consist of the loss of habitat and the plant and wildlife species that it contains within the area impacted by the proposed project. For the purposes of this assessment, all biological resources within the grading impact area are considered 100 percent lost.

Indirect Impacts are difficult to quantify but, in some cases, they may be as significant as direct impacts. In general, indirect impacts primarily result from adverse "edge effects," either short-term indirect impacts related to construction or long-term, chronic indirect impacts associated with the location of development in proximity to biological resources within natural open space.

Short-term indirect impacts that may potentially result from any project construction include dust production, which could affect plant growth and insect activity; noise, which could disrupt wildlife communication, including bird breeding behavior; lighting, which could disrupt behavior of nocturnal reptiles, mammals, and raptors; sedimentation, siltation, and erosion, which could affect water quality of onsite streams; and pollutant runoff, including chemicals used during construction and machinery maintenance, which could contaminate soil and water.

Cumulative Impacts refer to incremental individual environmental effects of the proposed project and other past, present, and reasonably foreseeable future projects when combined together. These impacts taken individually may be minor, but collectively may be significant as they occur over a period of time.

Vegetation Communities

This section of the document describes the specific impacts associated with the construction of the proposed project. Direct impacts consist of any ground-disturbing activities (i.e., vegetation removal, grading, paving, building of structures, installing landscaping, creating the fuel modification zone, etc.). The proposed project has been designed to minimize impacts to sensitive vegetation. Impacts will occur to chaparral, oak woodland, disturbed, and non-native grassland habitat. Most of these impacts will occur in the grading for the lots and roadways by removal of habitat. No state or federal listed plant species will be impacted by the proposed project.

DIRECT IMPACTS

Implementation of the proposed project would result in the direct permanent loss of habitat. The emergent and disturbed habitat supports common native wildlife species that would be directly affected by the removal of the habitat. This would include common species of reptiles, birds, and small mammals. The more mobile wildlife species, such as birds and larger mammals that utilize the affected area will be displaced during clearing activities to adjacent areas. These animals may move to open adjacent properties. The less mobile species will probably be lost during the habitat clearing and grading. Construction of the project will probably limit the future use of the area except for common reptile, bird and small mammal species that can be found in urban neighborhoods. The proposed project is designed to minimize impacts to drainage areas and sensitive habitats. The location of the lots and roadways is designed to eliminate impacts to sensitive habitats. Under current field conditions, no endangered or threatened species would be lost from implementation of this project.

Anticipated impacts to most sensitive wildlife species would be relatively minor, for the following reasons: (a) most of the potentially impacted species are Species of Special Concern, (b) a great portion of the project area is already disturbed by the existing equestrian trails and surrounding developments, and (c) the threatened/endangered species that occur in the project area would be avoided.

INDIRECT IMPACTS

Construction-related dust could indirectly impact growth of vegetation in adjacent areas. However, since the adjacent areas primarily support previously developed areas and a open space area to the south, the impacts associated with construction related dust are not expected to be significant. Construction-related erosion, sedimentation, and runoff may have an effect on plant growth and reproduction by altering the water, nutrients, and soil substrate. Indirect impacts to habitat areas may impact wildlife due to the presence of free roaming pets, especially cats and dogs. Other indirect impacts include interference with wildlife feeding patterns (e.g., intentional or unintentional feeding).

Potential long-term indirect effects resulting from the presence of the proposed project at the proposed location may include the introduction of urban runoff, and invasive plants into adjacent open space areas.

CUMULATIVE IMPACTS

Construction of the proposed project will permanently eliminate habitat. To determine if this impact is significant on a cumulative basis, it needs to be considered in the context of existing and future surrounding developments within this area of Orange County. Cumulative impacts could also result from the marginalization of quality of the habitat in close proximity to the future project by increased human activities associated with the development of the proposed project site. The cumulative effects of the proposed project on biological resources are considered insignificant for the following reasons:

The proposed project site totals approximately 127 acres, of which a certain portion will be disturbed. The proposed residential project will consist of single-family residential lots, and open space areas. An internal network of streets and cul-de-sacs will provide access to the lots. Sewer, water, gas, electric, telephone, and cable television services will be extended onto the site from existing main lines.

1. The proposed best management practices (BMP's) are part of the requirement for the proposed project by the Santa Ana Regional Water Quality Control Board for protection of surface water quality in the Santa Ana Watershed from sediments in the proposed project runoff. It is needed to protect adjacent areas. Sedimentation and run-off will be minimized by the BMP's proposed.

2. The habitat present is contiguous with blocks of habitat to the north, south and east of the proposed project site. West of the site are developed areas.

3. If the proposed project is not constructed, impacts to the existing area may still occur as a result of sedimentation, and erosion.

4. Anticipated impacts to sensitive wildlife species would be relatively minor, for the following reasons: (a) the project alternatives have been examined to minimize and avoid impacts to sensitive species and habitats, (b) the project area is somewhat disturbed by the existing anthropogenic activities and surrounding developments, and (c) the threatened species in the project area would be avoided.

MITIGATION MEASURES AND MONITORING

Based on the identified impacts, the following mitigation measures are recommended. Recommendations regarding the time period that implementation of the recommended mitigation measures should be completed vary. Therefore, the recommended mitigation measures are organized around that timeline.

Drainage

The project will incorporate project streets, open channels and natural drainage courses as well as a comprehensive system of underground storm drains to handle storm runoff

from the project site. Storm water from the project site and off-site tributary areas will be directed to storm drains. The design and operation of the drainage channel shall be adequate to preclude discharge of water into open space areas that are of lower quality or higher quantity than current conditions. The proposed development shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the open space area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into open space areas. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within open space areas. This will be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

Toxics

The proposed project is designed to utilize natural drainage patterns for the flow of surface water. Water Quality Best Management Practices (BMPs) include the vegetated earthen channel within the project and other BMPs such as education, storm drain stenciling, and street sweeping. The earthen channel shall be signed to filter potential toxics in the storm water prior to its discharge into open space areas. These BMPs will be implemented as part of the storm water pollution prevention measures for the project, in accordance with all appropriate NPDES requirements.

The project would result in the additional use of hazardous materials in limited quantities associated with normal residential use such as cleaning products, solvents, herbicides, and insecticides. However, compliance with regulations will reduce the potential risk of hazardous material exposure to a level that is less than significant. An information pamphlet has been prepared for each homeowner regarding the use of toxics.

The existing equestrian trail will be maintained in place within the designated open space areas. Public access will be maintained. No additional public access, including trails, will be placed next to or within open space areas.

Lighting

Night lighting shall be directed away from open space areas to protect species within the area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the open space area is not increased. Outdoor lighting of residences will be designed so that all direct beams would be confined to dwelling sites. The level of of-site lighting and lighting fixtures would comply with the applicable requirements and policies of the County of Orange. Project lighting will not intrude into the open space conservation areas. Street lighting, parking lot lighting, and other project-related illumination sources will be positioned, directed, and shielded so as to avoid “light spill” into the conserved areas. The proposed project will avoid any night lighting adjacent to the open space areas. Night lighting will not be used during the

course of construction unless absolutely necessary. If necessary, the lights will be directed and shielded to minimize lighting of the surrounding habitat.

Noise

The proposed project incorporates landscape elements including trees, shrubs, and groundcover, which will assist in noise reduction on the project site. No noise created on the project site would exceed residential noise standards.

Barriers

The proposed project will likely include walls and fencing located where public view and/or important interfaces are of concern. The project will incorporate special edge treatments designed to separate development areas from open space areas. These areas of native landscaping and fencing will serve to minimize unauthorized public access, domestic animals predation, and illegal trespass and dumping.

Exotic Vegetation Control

Design guidelines for the project will provide the homeowners with a list of native landscaping materials permitted within the project area. These materials have been selected for their contribution to the project theme, adaptability to local climatic and soil conditions, and for their compatibility with the unique natural environment in the project area. Sage scrub will be planted as appropriate on all manufactured slopes. In addition, restoration and enhancement of sage scrub and oak woodland species will be completed in designated conservation easement areas. The project will incorporate special edge treatments designed to separate development areas from open space areas. Landscape buffers would be incorporated into the project designs that minimize the intrusion of non-native plant species into natural areas. None of the plants listed in Section 7.16.2 of the Draft NCCP/MSAA/HCP will be utilized for the project and their use by future homeowners will be prohibited. A weeding program will be implemented if necessary and should follow the guidelines described below. Non-native plant removal strategies will be site-specific to take advantage of habitat breaks such as those created by large shrub patches, rock outcrops, or roads so that patches of weeds can be effectively controlled. The entire site will be surveyed annually for the first five years for weed removal. Areas where weeding is necessary will contain a significant amount of invasive exotic species with the potential to spread throughout the area. Weed removal will be done by hand or through repeated herbicide applications. The non-native plant removal process must be carefully monitored because as the dominant non-native plant species are removed, other non-native plant species can multiply rapidly and replace the formerly dominant non-native species particularly in more disturbed sites. The Draft NCCP/MSAA/HCP has identified exotic invasive plants that should be removed from open space areas. This list is included on 7-206 of the Draft NCCP/MSAA/HCP.

Access

Open space areas will be retained as open space and will be managed for the sole purpose of wildlife conservation in perpetuity. The conservation easements will prohibit all activities that may kill, injure, or otherwise significantly disturb wildlife or adversely impact their habitat within the easement areas. These activities include, but are not limited to, recreation (hiking, biking, walking pets), agriculture, communication tower

construction, gardening, dumping of garbage, off-road vehicle use, and construction of roads (other than the equestrian trail and project roads) or other structures.

Pets

Uncontrolled pets, feral dogs and cats can predate on native wildlife species. The following additional steps shall be taken to prevent the predation of native species by dogs and cats.

Appropriate signage will be posted, limiting and discouraging the use of the open space by hikers and their pets. Homeowner Educational pamphlets will be used to inform them of the potential impacts by uncontrolled pets on native habitats.

Grading/Land Development

All manufactured slopes that abut conservation easement areas will be retained as open space buffer zones. All manufactured slopes and areas disturbed by construction of these slopes will be revegetated with buffer species during project construction.

Sensitive Plants

Impacts on the many-stemmed dudleya and intermediate Mariposa lily can be mitigated to a level less than significant by one of the following options:

1. Avoidance of all populations of the many stemmed dudleya and intermediate mariposa lily (if located) shall be avoided to the extent possible.

2. If avoidance is not possible then offsite purchase of mitigation sites shall be researched to determine the feasibility of this option. The mitigation sites shall be open space that contain substantial populations of many stemmed dudleya and intermediate Mariposa lily (if located) and shall be dedicated in perpetuity.

3. If Options 1 and 2 above are not viable options, then a mitigation program as follows shall be conducted:

To compensate for the loss of many stemmed dudleya and intermediate Mariposa lily a plan that provides for the establishment of species by transplantation and seeding shall be developed and implemented by a qualified biologist. The detailed mitigation plan shall be approved by the appropriate agencies prior to issuance of a grading permit and shall include the following requirements.

- Procedures for determining a suitable mitigation site to transplant the plants, bulbs and broadcast lily seeds shall be determined. Field surveys shall be conducted to identify the proposed mitigation site and locate suitable locations for the transplant effort. Proposed sites should not contain an existing population of the intermediate Mariposa lily. The site shall be marked in the field with stakes and flagging.
- A pre-construction survey during the peak flowering period, approximately March-June, shall be conducted by the project biologist. The limits of each impacted location will be

clearly delineated with lath and brightly colored flagging. These localities will be monitored once every two weeks, following the end of the flowering period, to determine the suitable time for seed collection. A qualified seed collector will collect all of the seeds from the plants to be impacted when the seeds are ripe. The seeds will be cleaned and stored by a qualified nursery or institution with appropriate storage facilities. Following the seed collection, the bulbs will be dug up and stored by a qualified nursery or institution with appropriate storage facilities. The top 12 inches of topsoil from the plant locations will be scraped, stockpiled, and used in the selected mitigation site.

- Detailed procedures for implementing the transplantation of the many stemmed dudleya and intermediate mariposa lily will be described in the plan. This will include, but will not be limited to trash/weed removal; respreading of native topsoil; soil treatments; and irrigation system modification/repair erosion control.
- Approximately 60 percent of the seeds and bulbs shall be spread/placed at the selected site in the fall following site preparation. Forty percent of the seed and bulbs shall be kept in storage for supplemental planting, in the event of future plant failure.
- A detailed maintenance and monitoring plan will be developed by a qualified biologist. The plan will include detailed descriptions of appropriate maintenance measures, monitoring requirements, and annual report requirements. The project biologist shall have full authority to suspend any operation on the mitigation site which is, in the qualified biologist's opinion, not consistent with the restoration plan. Any disputes regarding the consistency of an action with the restoration plan shall be resolved by the applicant and the biologist.
- The mitigation plan shall provide a series of performance criteria to evaluate the success of the transplantation effort. This shall include requirements for a minimum of 60 percent germination of the number of plants collected. The performance criteria should also include percent cover, density, and seed production requirements. This criteria will be developed by the biologist using a reference population for density. The monitoring period for the impacts shall be five years or until the site is determined a success in coordination with the resource agencies.
- If after the five-year period at least 60 percent of the total number of plants removed by the project have not become established at the mitigation site, then additional mitigation will be required. If after the five-year period at least eighty (80) percent of the total number of plants removed had not developed on the mitigation site, then the material held in storage shall be reseeded/planted into the mitigation site. The mitigation effort would be considered successful and no additional monitoring would be required.

With implementation of the above program, impacts on many stemmed dudleya and intermediate mariposa lily would be mitigated to a less than significant impact.

Burrowing Owl

A pre-construction survey of all on-site rodent burrows will be evaluated by an experienced burrowing owl biologist and confirmed as not having any owls in them, not more than 30 days before earth disturbance (construction). The surveys will be conducted as close to the actual construction initiation date as possible.

Coastal California Gnatcatcher and Coastal Cactus Wrens

If construction is to occur during the coastal California gnatcatcher and coastal cactus wrens nesting cycle (February 1-August 31) than a nesting bird survey should be conducted by a qualified biologist. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered take and is potentially punishable by fines or imprisonment. Active bird nests should be mapped utilizing a hand-held global positioning system (GPS) and a 500' buffer will be flagged around the nest. Construction should not be permitted within the buffer areas while the nest continues to be active (eggs, chicks, etc.).

Migratory Birds

If construction is to occur during the MBTA nesting cycle (February 1-August 31) than a nesting bird survey should be conducted by a qualified biologist. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered take and is potentially punishable by fines or imprisonment. Active bird nests should be mapped utilizing a hand-held global positioning system (GPS) and a 300' buffer will be flagged around the nest (500' buffer for raptor nests). Construction should not be permitted within the buffer areas while the nest continues to be active (eggs, chicks, etc.).

Permits/Agreements

A California Department of Fish and Game Streambed Alteration Agreement and California Regional Water Quality Control Board Water Quality Certification (401)/Waste Discharge Requirement (WDR) may be required prior to beginning work in the drainage areas. Final authority over the area rests with the appropriate agencies.

Maintenance and Refueling

Maintenance and refueling of construction equipment shall be limited to areas specified as appropriate by the project biologist. During construction, disposal of such material will occur in a controlled area that is physically separated from potential storm water runoff.

MONITORING RECOMMENDATIONS

- To mitigate for potential increase of toxics, Project Applicant will complete a Storm Water Pollution Prevention Plan (SWPPP), in accordance with all appropriate NPDES requirements, via issuance and implementation of a Clean Water Act 402 NPDES Storm Water Pollution Prevention Plan, to reduce the potential risk of hazardous materials associated with normal residential use such as cleaning products, solvents, herbicides, and insecticides.
- To mitigate for exposure of native areas to additional human presence, pets, and exotic vegetation Orange County approved barriers will be placed around the houses.
- To mitigate for exposure of native areas to exotic vegetation an exotic vegetation removal program will be implemented.

- To mitigate for exposure of native areas to additional human presence and pets an owner education program will be implemented.
- To mitigate for exposure of protected habitat areas to additional human presence and pets, a homeowner education program will be implemented.
- To mitigate for loss of on-site waters due to project construction, Project Applicant will enter into an agreement with the California Regional Water Quality Control Board (via issuance and implementation of a Clean Water Act Section 401 Certification) to replace affected waters and at a ratio specified by the California Regional Water Quality Control Board through fee payment and/or on-site creation of replacement waters.
- To mitigate for loss of on-site streambed due to project construction, Project Applicant may be required to enter into an agreement with the California Department of Fish and Game (via issuance and implementation of a Streambed Alteration Agreement, Section 1600) to replace affected streambed and at a ratio specified by the California Department of Fish and Game through fee payment and/or on-site creation of replacement streambed. Project site is within NCCP/MSAA/HCP Subarea 3 Coto de Caza, which does not specify which lots are covered under the NCCP/MSAA/HCP.

TABLE 7: REQUIRED MITIGATION MONITORING

Mitigation Measure	Monitoring Required	Entity to Perform and/or Report on the Measure
SWPPP	Construction and post-construction compliance	Applicant
Barriers	Construction and post-construction compliance	Applicant
Exotic vegetation	Construction and post-construction compliance	Applicant
Pet Restriction	Construction and post-construction compliance	Applicant
Access Restriction	Construction and post-construction compliance	Applicant
Sensitive Plants	Construction and post-construction compliance	Applicant
RWQCB Certification	If impacting unnamed drainages then RWQCB WDR required prior to grading permit.	Applicant
CDFG Streambed Alteration Agreement	If impacting unnamed drainages then CDFG 1600 Permit may be required prior to grading permit.	Applicant

Minimize construction impacts by implementing a Water Pollution Control Program and Best Management Practices. Minimize project footprint to reduce impacts to sensitive habitat. Include mitigation and monitoring measures discussed in Section 5 above.

With these recommendations, impacts to the area will be minimized to the greatest extent possible.

VII. LIST OF PREPARERS

This Biological Study was prepared by Nick Landers and Teresa Gonzales. The document encompasses changes in project design, coordinates information from various biologists in a comprehensive report.

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IX. APPENDICES

Appendix A: Overall Site Map

Appendix B: Focused Gnatcatcher Survey

Appendix C: Focused Least Bell's Vireo and Southwestern Willow flycatcher Survey

Appendix D: Rare Plant Survey

Appendix E: Streambed/Wetland Delineation

Appendix F: Plant and Animal Compendium

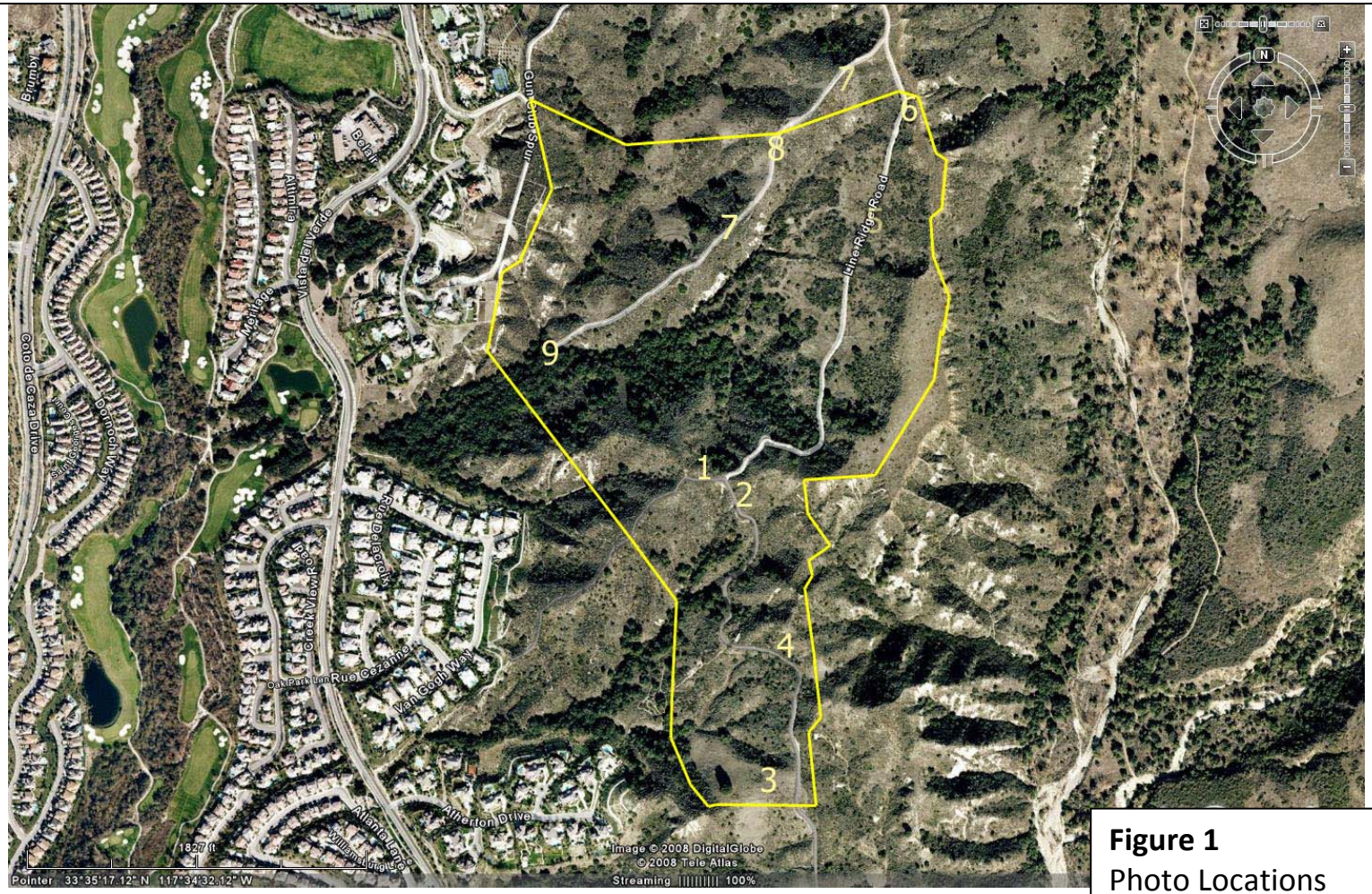

Figure 1
Photo Locations

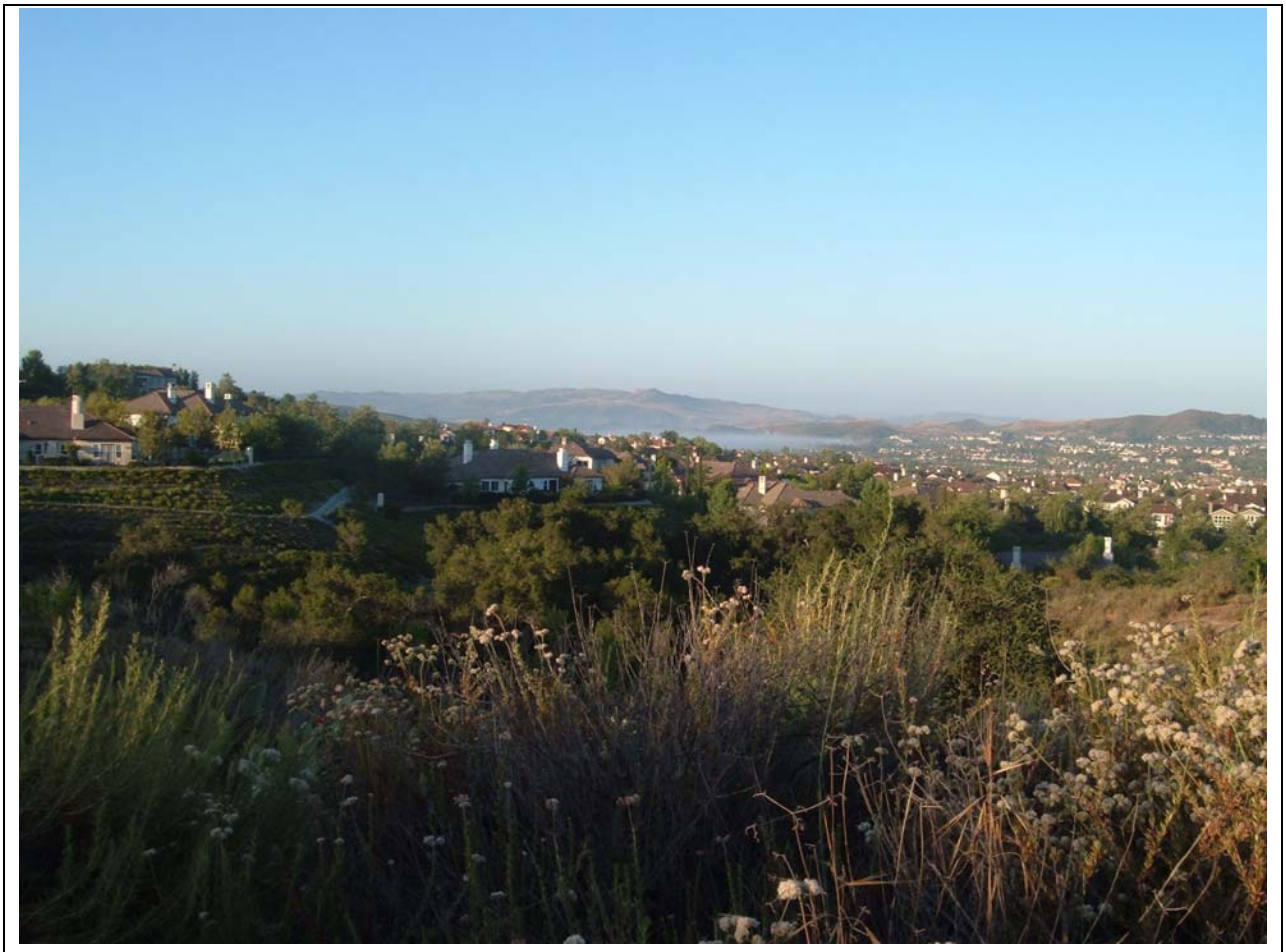

Figure 2
Picture 1
View West

Figure 3
Picture 2
View Southwest

Figure 4
Picture 3
View Northwest

Figure 5
Picture 4
View South

Figure 6
Picture 5
View Southeast

Figure 7
Picture 6
View East

Figure 8
Picture 7
View Northwest

Figure 9
Picture 8
View West

Figure 10
Picture 9
View East

HABITAT ASSESSMENT & RARE PLANT SURVEY FOR SPECIAL STATUS PLANTS
APN 125-101-02
Community of Coto de Caza
Orange County, California
Canada Gobernadora Quadrangle
Township 7S, Range 7W, portions of Sections 1 and 2

Prepared For:

Coto de Caza View Estates
Mr. Robert Love
22861 Tindaya
Mission Viejo, CA 92692

Prepared By and Principal Investigator**:**

GONZALES
ENVIRONMENTAL CONSULTING, LLC

51-842 Avenida Diaz
La Quinta, CA 92253
(760) 777-1621

Report Date: September 25, 2009

TABLE OF CONTENTS

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: September 25, 2009

Signed: 

SUMMARY

The project proponent proposes to subdivide APN 125-101-02 into approximately 5-15 sections, with associated roads and driveways in the Community of Coto de Caza, Orange County, California.

The proposed project site is located in the southeastern portion of Coto de Caza, adjacent to Starr Ranch. Elevation within the study area ranges from approximately 700 feet to 850 feet.

The site supports native vegetation communities, including coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas.

In April, May, June and July 2008 and again in April, May, June, July, and August 2009 Teresa Gonzales, Principal Biologist for Gonzales Environmental Consulting, LLC (GEC), conducted focused surveys for coastal California gnatcatcher on the proposed project site.

Intermediate mariposa lily (*Calochortus weedii var. intermedius*) and many-stemmed dudleya (*Dudleya multicaulis*) were found immediately adjacent to the proposed project site during the surveys. The site is within the Orange County Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP).

I. PROJECT DESCRIPTION

This report summarizes the findings of focused surveys to determine presence or absence of sensitive vegetation on the Coto de Caza site.

STUDY AREA

The site is located within San Bernardino Meridian in Sections 1 and 2, Township 7 South, and Range 7 West in Orange County, California (Figures 1, 2 and 3). This location is shown on the Canada Gobernadora, California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Canada Gobernadora 1979); page 923 (blocks 2D, and 3D) of the current Orange County Street Guide and Directory (Thomas Brothers Maps Design 2007). The approximate center of the site is located at 33.3532.44°N, 117.3427.87°W.

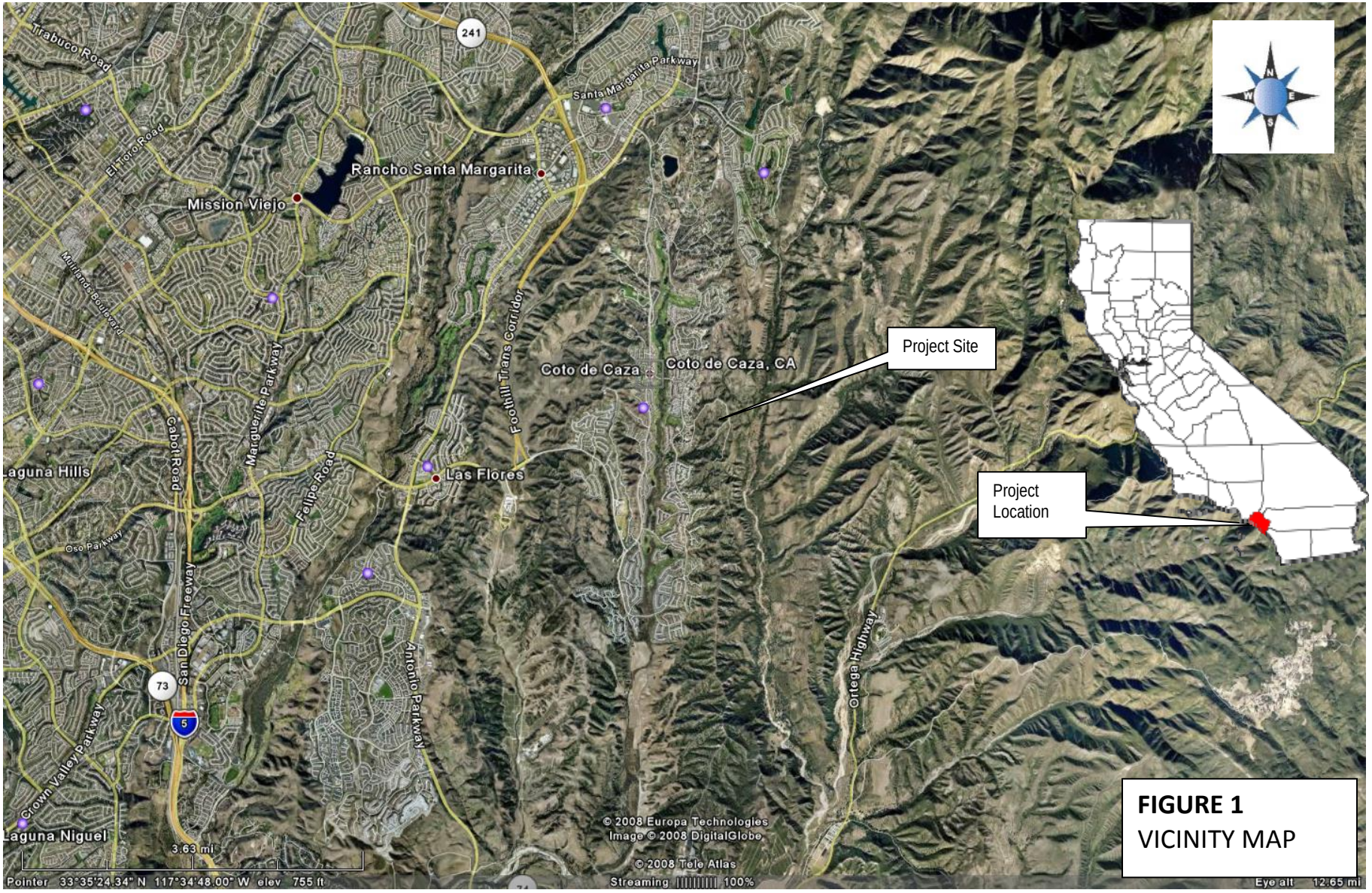

FIGURE 1
VICINITY MAP

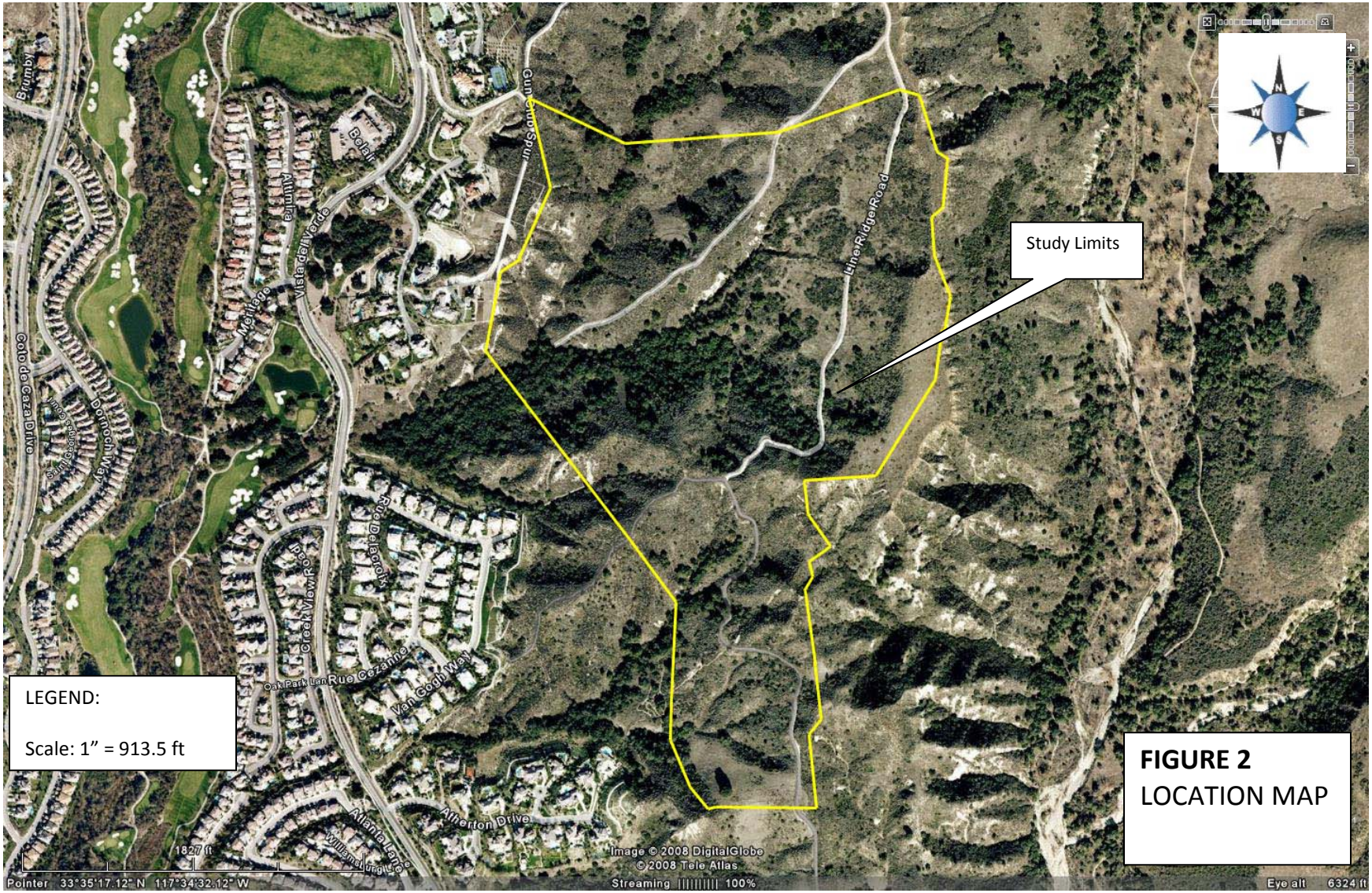

FIGURE 2
LOCATION MAP

Please note that this is an approximate locality map, and should not be used for calculations

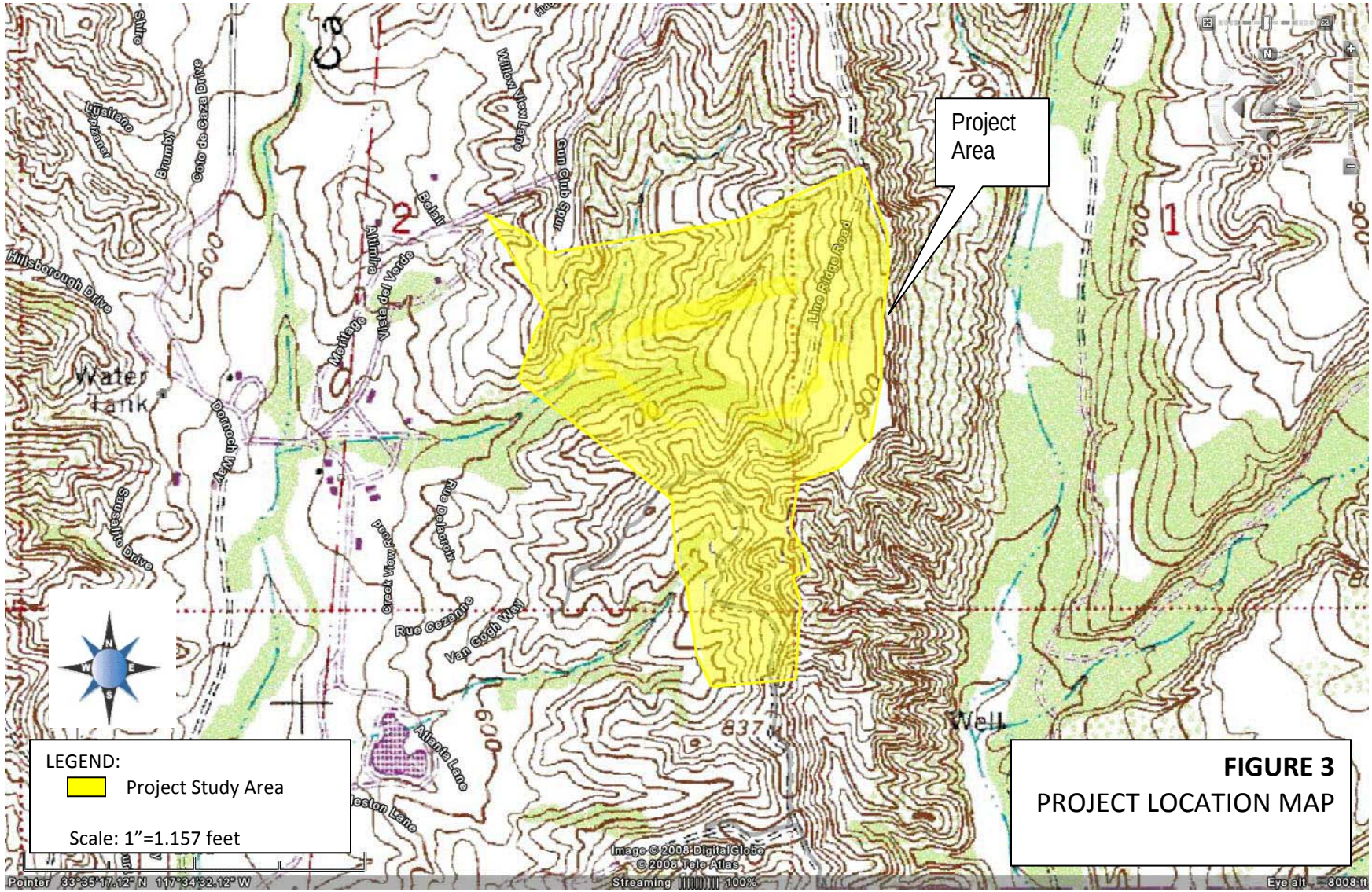

FIGURE 3
PROJECT LOCATION MAP

Please note that this is an approximate locality map, and should not be used for calculations

This report was authorized via subcontract with Coto de Caza View Estates. Teresa Gonzales was the biologist for this project. Paul Gonzales and Nick Landers also assisted. Field surveys for special-status plant species were conducted on Field surveys in 2009 for California gnatcatcher were conducted on April 14, 18, 29; May 9, 15, 29; June 5, 19, 29; July 14,28; and August 7, 21, 30, 2009.

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II. STUDY AREA CONDITIONS

The following sections summarize the study area conditions. For purposes of this report, the term study area includes the proposed project construction limits and a surrounding 1,300-foot buffer (Figure 3).

Physical Conditions

Elevations in the project area vary from approximately 700 feet to 850 feet. The site is in a foothill area with headwaters of two intermittent drainages in the northern and southern portion of the project sit. The drainages and drainage edges, and portions of the uplands, support a mix of vegetation communities (coast live oak woodland, coastal sage scrub, chaparral, needlegrass, non-native grasslands and disturbed areas) that typically support a diversity of wildlife species, particularly birds. The drainages supports coast live oak woodland and coastal sage scrub.

The biological conditions in the areas that were surveyed for this biological resources assessment vary somewhat depending upon the patchiness of the oak woodland habitat. The oak woodland areas provide important foraging, cover, and nesting opportunities for wildlife. The habitat is typical of southern California alluvial systems, which has braided open areas between patches of vegetation.

Definitions

Vegetation Communities

Vegetation habitats or communities are assemblages of plant species that usually coexist in the same area. The classification of vegetation communities is based upon the life form of the dominant species within the community and the associated flora. The nomenclature for vegetation communities follows Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986), as modified by Oberbauer (1996).

Wildlife Habitats

Wildlife habitats differ from vegetation communities in that a wildlife habitat may contain several vegetation communities that are similar in structure but different in the plant species composition, location, and soil substrate. This distinction becomes an important factor when assessing the sensitivity of a particular wildlife habitat to impacts. In addition, the interaction of various wildlife species occurs between many different wildlife habitats. This becomes more evident where these habitats overlap in areas known as ecotones. These ecotones support a combination of species from two or more adjoining habitats that generally increases the number and diversity of species within these areas. Wildlife habitats encountered on the project site approximate the vegetation communities discussed is this report.

Vegetation

The project site is comprised of coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas. Residential areas consisting of medium density single family homes occur west of the project site. Both unnamed drainages drain into the residential area. In addition to the residential areas noted as Developed on the vegetation community map, disturbed areas also occur throughout the project site. Starr Ranch lies on the east side of the project site.

COASTAL SAGE SCRUB

Coastal sage scrub is represented by several major associations that occur discontinuously from the San Francisco Bay area south to El Rosario in Baja California, Mexico. Coastal sage scrub is dominated by a characteristic suite of low-statured, aromatic, drought- deciduous shrubs and subshrub species. Composition varies substantially depending on physical circumstances and the successional status of the vegetation community. Characteristic species include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), California encelia (*Encelia californica*), and several species of sage (*e.g., Salvia mellifera, Salvia apiana*) (Holland). Other common species include brittlebush (*Encelia farinosa*), lemonadeberry (*Rhus integrifolia*), sugarbush (*Rhus ovata*), Mexican elderberry (*Sambucus mexicana*), sweetbush (*Bebbia juncea*), boxthorn (*Lycium* spp.), prickly-pear (*Opuntia littoralis*), coastal cholla (*Opuntia prolifera*), tall prickly-pear (*Opuntia oricola*), and several

species of live forever (*Dudleya*).

The more open nature of the canopy permits persistence of a diverse herbaceous component of forbs, grasses, and succulents in mature stands than usually is associated with chaparral. It often is mixed with chaparral and grassland communities and the distinct boundaries between each can sometimes be difficult to delineate (Draft NCCP).

ANNUAL (NON-NATIVE) GRASSLAND

Non-native grassland is characterized by a sparse to dense cover of annual grasses typically up to two feet tall, with many annual wildflowers also present in years with favorable rainfall. This vegetation community typically occurs on fine-textured soils that are moist or wet in the winter and very dry during summer and fall. Plant species present typically include wild oat (*Avena* spp.), bromes (*Bromus* spp.), tarweeds (*Centromadia* spp., *Deinandra* spp.), and filarees (*Erodium* spp.) (Holland 1986). In Orange County, annual grasslands often occur where the native habitat has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities. Annual grasslands in the project area are dominated by bromes (*Bromus madritensis*, *Bromus diandrus, and Bromus hordaceous*), wild oats (*Avena barbata, Avena fatua*), rat-tail fescue, barleys (*Hordeum* spp.) and Italian ryegrass. Annual forbs include tocalote, common fiddleneck (*Amsinckia menziesii*), popcornflower (*Plagiobothrys* spp.), black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), common catchfly, stickwort (*Spergularia arvensis*), miniature lupine (*Lupinus bicolor*), white-whorl lupine (*Lupinus densiflorus var. austocollium*), burclover (*Medicago polymorpha*), bristled clover (*Trifolium hirtum*), red- stemmed filaree, white-stemmed filaree (*Erodium moschatum*), and fluellin (*Kickxia elatine*).

VALLEY NEEDLEGRASS GRASSLAND

Valley needlegrass grassland is a mid-height (to 2 feet) grassland dominated by perennial, tussock-forming purple needlegrass (*Stipa pulchra*). Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover. Usually on fine-textured (often clay) soils, moist or even waterlogged during winter, but very dry in summer. Often intergrades with oak woodlands on moister, better drained sites (Holland). In the project area valley needlegrass grassland is determined when there is more than 10 percent cover of purple needlegrass (*Nassella pulchra*). It is associated with the annual grasses listed above, leafy bentgrass (*Agrostis pallens*), junegrass (*Koeleria macrantha*), cane bluestem (*Bothriochloa barbiodis*), coast range melic (*Melica imperfecta*) and annual forbs such as common goldenstar (*Bloomeria crocea*), blue dicks, Cleveland's goldenstar (*Dodecatheon clevelandii*), smooth cat's-ear (*Hypocharis glabra*), lilac mariposa lily (*Calochortus splendens*), many-stemmed dudleya (*Dudleya multicaulis*), blue-eyed grass (*Sisyrinchium bellum*) and rosin weed (*Calycadenia truncata*)(Draft NCCP).

CHAMISE CHAPARRAL

Chamise chaparral is a 1-3 meter tall chaparral overwhelmingly dominated by chamise. Associated species contribute little to cover. It is adapted to repeated fires by stump

sprouting. Mature stands are densely interwoven with very little herbaceous understory or litter. This chaparral is found on dry soils on xeric slopes and ridges. Some typical plant species include chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos glauca*), ceanothus (*Ceanothus cuneatus*), scrub oak (*Quercus dumosa*), sugar bush (*Rhus ovata*), white sage (*Salvia apiana*), and chaparral yucca (*Yucca whipplei*).

COAST LIVE OAK WOODLAND

Coast Live Oak Woodland is typically found on north-facing slopes and shaded ravines below 4000 feet. This oak woodland is dominated by the Coast Live Oak (*Quercus agrifolia*), which is evergreen and reaches 10-25 meters in height. The shrub layer is poorly developed, but may include Toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes spp.*), laural sumac (*Rhus laurina*), or elderberry (*Sambucus mexicana*). The herb layer is continuous and dominated by brome grass (*Bromus diandrus*) and several other non-native species. Other typical species include California buckeye *(Aesculus californica*), coffee berry (*Rhamnus californica*), poison oak (*Toxicodendron diversilobum*), and California sagebrush (*Artemisia californica*).

DISTURBED

The disturbed areas include all dirt roads located on the project site. Disturbed habitat refers to land that has been permanently altered by previous human activity that has eliminated all future biological value of the land for most species. The native or naturalized vegetation is no longer present and the land lacks habitat value for sensitive wildlife, including potential raptor foraging. This area has no habitat value.

Wildlife

Wildlife species observed or detected in the survey area were characteristic of those that would be expected to occupy habitats in the region. Below is a discussion of the terrestrial wildlife observed or expected that primarily utilize the uplands and oak woodland habitats.

These species include California gnatcatcher, cactus wren, wrentit (*Chamaea fasciata*), greater roadrunner (*Geococcyx californianus*), bushtit (*Psaltriparus minimus*), spotted towhee (*Pipilo erythrophthalmus*), California thrasher (*Toxostoma redivivum*), black-chinned sparrow (*Spizella atrogularis*), grasshopper sparrow (*Ammodramus savannarum*), Savannah sparrow (*Passerculus sandwichensis*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), loggerhead shrike (*Lanius ludovicianus*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*).

Bats occur throughout most of southern California and are using the area as foraging habitat. The gaps in peeling bark and hollow snags or limbs and rock outcroppings provide potential roosting and maternal colony opportunities for bat species.

KHALDA DEVELOPMENT
(COTO DE CAZA ESTATES)

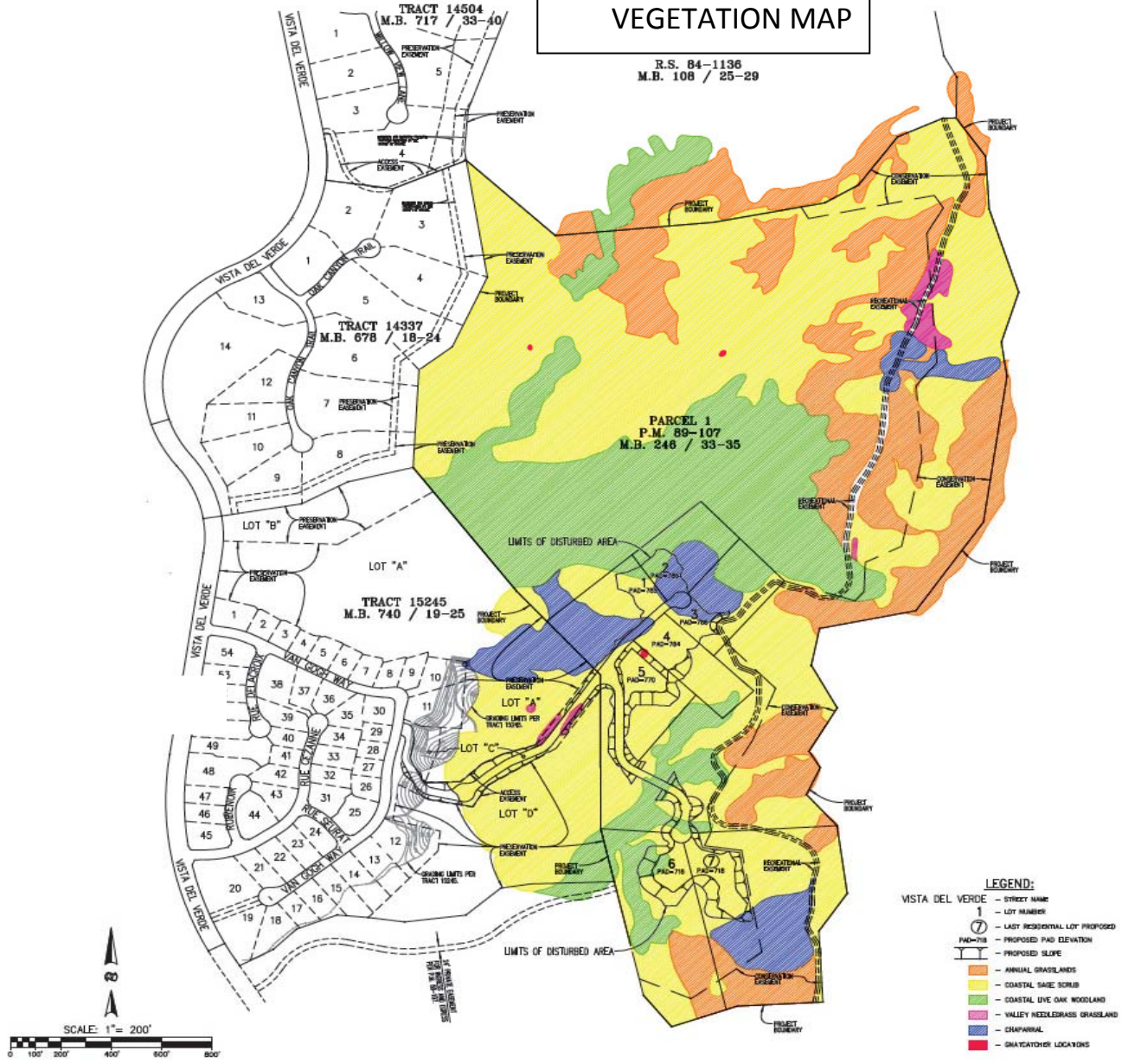
DISTURBED AREA TABULATION BLOCK		
BIOLOGICAL AREAS	DISTURBED AREA QUANTITY	PERCENTAGE OF PROJECT DISTURBED
ANNUAL GRASSLANDS	0 ACRES	0%
COASTAL SAGE SCRUB	7.8 ACRES	6.14%
COASTAL LIVE OAK WOODLAND	0.8 ACRES	0.63%
VALLEY NEEDLEGRASS GRASSLAND	0.1 ACRES	0.08%
CHAPARRAL	0.9 ACRES	0.71%
GNATCATCHER LOCATIONS	0.02 ACRES	0.02%

TOTAL PROJECT AREA = ± 127 ACRES
TOTAL UNDISTURBED AREA = 117.38 ACRES; PERCENTAGE OF PROJECT UNDISTURBED = 92.4%
TOTAL DISTURBED AREA = 9.62 ACRES; PERCENTAGE OF PROJECT DISTURBED = 7.6%

GENERAL NOTES:

1. THE BIOLOGICAL AREA LOCATIONS AND LIMITS SHOWN HEREON ARE PER A HAND MARKED-UP COLOR EXHIBIT PREPARED BY PAUL GONZALES ENVIRONMENTAL CONSULTING.
2. THE BIOLOGICAL AREA DESCRIPTIONS SHOWN HEREON ARE PER AN 8 1/2" X 11" PDF COLOR EXHIBIT PREPARED BY PAUL GONZALES ENVIRONMENTAL CONSULTING REVISED MARCH 20, 2009.
3. THE PROPOSED DESIGN ELEMENTS SHOWN HEREON (STREETS, LOTS, SLOPES, ETC.) ARE PER "LOT LAYOUT CONFIGURATION STUDY #4". THE DISTURBED AREA LIMITS ARE BASED UPON THE PROPOSED DESIGN LIMITS AS SHOWN ON "LOT LAYOUT CONFIGURATION STUDY #4".
4. ALL EASEMENTS SHOWN HEREON ARE EXISTING.

FIGURE 4
VEGETATION MAP



III. FOCUSED PLANT SURVEYS

Plant Background

Information on special status rare plant species within the project area was gathered from several sources including California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2008), CNDDB (CNDDB 2008), and CalFlora (CalFlora 2008). Maps depicting all known sensitive plant species locations within the project area were produced to aid in determining the target species for survey. General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plants. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements.

Sensitive plant surveys of the project area were conducted in April, May, June, July, and August 2009. This time period corresponds to the time during which most ephemeral spring annuals and herbaceous perennials, especially sensitive plant species, in Orange County would be most detectable. Focused rare plant level surveys were conducted, and no sensitive plant species were located. Sensitive species that were not observed due to unusual climate patterns but potentially could occur within the project area were also documented. The likelihood of these species occurrence (expected, high, moderate, low, or not expected) was also assessed.

A floral inventory of all species observed during the course of the surveys was also documented. Table 1 includes the special-status plant species in the Canada Gobernadora quadrangle.

TABLE 1

RARE, THREATENED OR ENDANGERED PLANTS IN CANADA GOBERNADORA QUADRANGLE

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	CALIF STATUS	CDFG	CNPS LIST
Pseudognaphalium leucocephalum	white rabbit-tobacco	None	None		2.2
Centromadia parryi ssp. australis	southern tarplant	None	None		1B.1
Caulanthus simulans	Payson's jewel-flower	None	None		4.2
Atriplex coulteri	Coulter's saltbush	None	None		1B.2
Dudleya multicaulis	many-stemmed dudleya	None	None		1B.2
Dudleya viscida	sticky dudleya	None	None		1B.2
Satureja chandleri	San Miguel savory	None	None		1B.2
Sidalcea neomexicana	Salt Spring checkerbloom	None	None		2.2
Nolina cismontana	Peninsular nolina	None	None		1B.2
Brodiaea filifolia	thread-leaved brodiaea	Threatened	Endangered		1B.1
Calochortus weedii var. intermedius	intermediate mariposa-lily	None	None		1B.2
Imperata brevifolia	California satintail	None	None		2.1

CNPS List= California Native Plant Society
CNPS 1B= Rare or Endangered In California and Elsewhere
CNPS 2= Rare or Endangered in California, More Common Elsewhere
CNPS 3= Need More Information
CNPS 4= Plants of Limited Distribution

CNPS New Threat Code extensions and their meanings:
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Table 2 documents the special-status plant species and their likelihood of occurrence on the proposed project site. Focused surveys were completed on April 14, 18, and 29; May 9, 15, and 29; June 5, 19, and 29; July 14, and 28; and August 7, 21, and 30, 2009.

TABLE 2

SPECIAL STATUS PLANT SPECIES AND THEIR LIKIHOOD OF OCCURENCE

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/ Life Form	Status Onsite or Potential to Occur
Pseudognaphalium leucocephalum	white rabbit-tobacco	None	2.2	Sandy or gravelly slopes, stream bottoms, arroyos, areas of oak-sycamore, oak-pine, to pine woodlands, commonly in riparian vegetation; 0-492 feet	Not observed during flowering period. Medium potential.
Centromadia parryi ssp. australis	southern tarplant	None	1B.1	Marshes and swamps (margins);Valley and foothill grassland (vernally mesic);Vernal pools; 0-427 meters	Not observed during flowering period. Low potential.
Caulanthus simulans	Payson's jewel-flower	None	4.2	open dry areas of western Riverside Co., eastern Peninsular Ranges, western edge Sonoran Desert	Not observed during flowering period. Low potential.
Atriplex coulteri	Coulter's saltbush	None	1B.2	Usually occurs in non-wetlands, but occasionally found on wetlands. Found in dunes, coastal areas; coastal strand, valley grassland, coastal sage scrub.	Not observed during flowering period. Low potential.
Dudleya multicaulis	many-stemmed dudleya	None	1B.2	Openings in Sage Scrub and Valley Grasslands	Present
Dudleya viscida	sticky dudleya	None	1B.2	Found on coastal bluffs and inland rocky slopes in Chaparral, Coastal Sage Scrub.	Not observed during flowering period. Low potential.
Satureja chandleri	San Miguel savory	None	1B.2	Chaparral and oak woodland habitat and may be restricted to gabbroic or metavolcanic derived soils.	Not observed during flowering period. Low potential.
Sidalcea neomexicana	Salt Spring checkerbloom	None	2.2	Playas; Creosote Bush Scrub, Chaparral, Yellow Pine Forest, Coastal Sage Scrub, Alkali Sink, wetland-riparian	Not observed during flowering period. Low potential.
Nolina cismontana	Peninsular nolina	None	1B.2	Xeric Diegan Sage Scrub and open chaparral	Not observed during flowering period. Low potential.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE	1B.1	Vernal pools; Valley Grassland, Foothill Woodland, Coastal Sage Scrub, Freshwater Wetlands, wetland-riparian	No suitable habitat or soils; not expected.
Calochortus weedii var. intermedius	intermediate mariposa-lily	None	1B.2	Chaparral, Valley Grassland, Coastal Sage Scrub	Not observed during flowering period on the project site-two small populations found immediately adjacent to project site. High potential.

Legend

FE:	Federally-listed as endangered	SE:	State-listed as endangered
FT:	Federally-listed as threatened	ST:	State-listed as threatened
SCE:	State candidate for listing as endangered	SR:	State rare

CNPS List= California Native Plant Society
CNPS 1B= Rare or Endangered In California and Elsewhere
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Soils

The soil associations mapped for the area are the Cieneba-Anaheim-Soper association: Strongly sloping to very steep, somewhat excessively drained and well drained sandy loams, loams, clay loams, gravelly loams, and cobbly loams on coastal foothills. The soil series mapped for the area are described in Table 3. There no hydric soils listed for the area. The soils found are consistent with the soils mapped for the area.

TABLE 3
SOIL SERIES MAPPED FOR THE AREA

Symbol	Name	Description
132	BOTELLA CLAY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well-drained soils on alluvial fans. Slopes are 2-9%. These soils developed in sedimentary alluvium. Elevations range from 25-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual temperature is 62 degrees F, and the average frost-free season from 260-350 days. The vegetation is chiefly annual grasses, forbs, and some oak trees and brush.
133	BOTELLA CLAY LOAM, 9 TO 15 PERCENT SLOPES	The soils are made up of well-drained soils on alluvial fans. Slopes are 9-15%. These soils developed in sedimentary alluvium. Elevations range from 25-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual temperature is 62 degrees F, and the average frost-free season from 260-350 days. The vegetation is chiefly annual grasses, forbs, and some oak trees and brush.
134	CALLEGUAS CLAY LOAM, 50 TO 75 PERCENT SLOPES, ERODED	The soils are made up of well-drained soils on uplands, and have slopes of 50-75%. These soils formed in material weathered from lime coated shale or lime coated sandstone, or both. Elevations range from 200-2,500 feet. The average annual rainfall ranges from 13-20 inches, the average annual air temperature is 61 degrees F, and the average frost-free season from 300-350 days. The vegetation is mostly grasses, forbs, mostly mustard and brush.
135	CAPISTRANO SANDY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well drained soils. Slopes are 2-9%. These soils developed in granitic alluvium on alluvial fans and alluvial plains in small valleys of the Santa Ana Mountains and in sedimentary alluvium of the coastal foothills. Elevations range from 25-2,500 feet. The average annual rainfall ranges from 14-25 inches, the average annual air temperature is about 60 degrees F, and the average frost-free season from 240-340 days. The vegetation is mostly grasses.
141	CIENEBA SANDY LOAM, 15 TO 30 PERCENT SLOPES	The soils are made up of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 15-30%. Elevations range from 200-4,000 feet. The average annual rainfall ranges from 14-25 inches, the average annual temperature from 59-62 degrees F, and the average frost-free season from 200-340 days. The vegetation is mostly brush.
142	CIENEBA SANDY LOAM, 30 TO 75 PERCENT SLOPES, ERODED	The soils are made up of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 30-75%.

Symbol	Name	Description
		Elevations range from 200-4,000 feet. The average annual rainfall ranges from 14-25 inches, the average annual temperature from 59-62 degrees F, and the average frost-free season from 200-340 days. The vegetation is mostly brush.
169	MODJESKA GRAVELLY LOAM, 2 TO 9 PERCENT SLOPES	The soils are made up of well-drained soils on terraces. These soils developed in mixed alluvium. Slopes are 2-9%. Elevations range from 200-1,500 feet. The average annual rainfall ranges from 14-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 280-330 days. The vegetation is annual grasses, forbs, and some brush along terrace breaks.
171	MODJESKA GRAVELLY LOAM, 15 TO 30 PERCENT SLOPES	The soils are made up of well-drained soils on terraces. These soils developed in mixed alluvium. Slopes are 15-30%. Elevations range from 200-1,500 feet. The average annual rainfall ranges from 14-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 280-330 days. The vegetation is annual grasses, forbs, and some brush along terrace breaks.
175	MYFORD SANDY LOAM, 9 TO 15 PERCENT SLOPES	The soils are made up of moderately well drained soils on marine terraces. These soils developed in sandy sediments. Slopes are 9-15%. Elevations range from 50-1,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 270-350 days. The vegetation is annual grasses, and forbs, and scattered low growing brush.
192	ROCK OUTCROP-CIENEBA COMPLEX, 30 TO 75 PERCENT SLOPES	Rock outcrop consists of large exposures of sandstone or granite and boulders. Found in mountains or on foothills. It is 50% or more Rock outcrop and boulders and 50 % or less Cieneba soils. The soils are somewhat excessively drained. They formed in material weathered from granitic or sandstone rock. Slopes are 30-75%. Elevations range from 200-4,500 feet. The average annual rainfall ranges from 14-25 inches, the average annual air temperature is 59-62 degrees F, and the average frost-free season from 200-350 days.
200	SOPER LOAM, 30 TO 50 PERCENT SLOPES	The soils are made up of moderately well drained soils on foothills. These soils developed in weakly consolidated sandstone and conglomerate. Slopes are 30-50%. Elevations range from 200-2,500 feet. The average annual rainfall ranges from 12-20 inches, the average annual air temperature is about 62 degrees F, and the average frost-free season from 270-350 days. The vegetation is sage, cactus, and brush, and in some areas an understory of annual grasses and forbs.

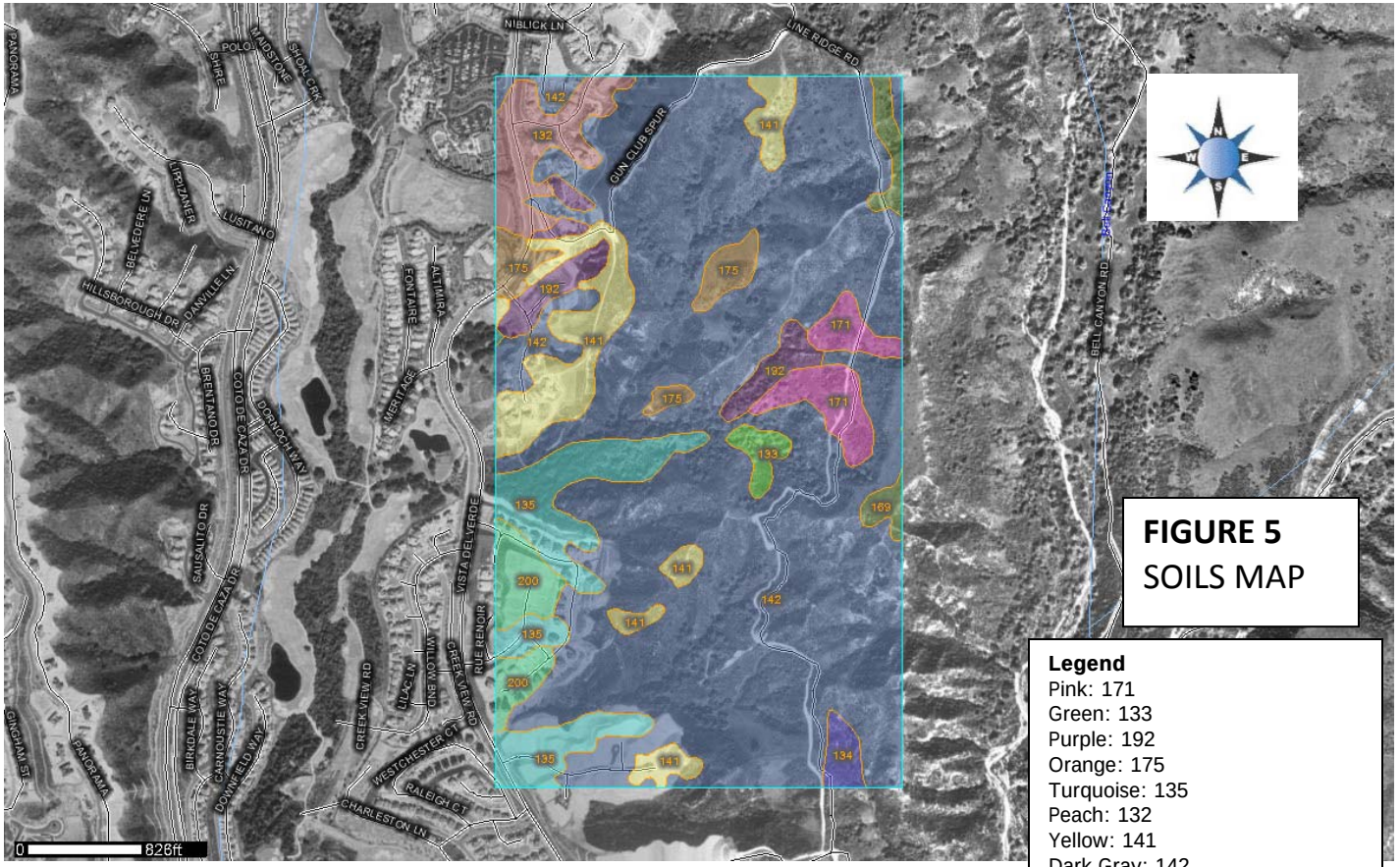

FIGURE 5
SOILS MAP

Legend
Pink: 171
Green: 133
Purple: 192
Orange: 175
Turquoise: 135
Peach: 132
Yellow: 141
Dark Gray: 142
Dark Green: 169
Light Green: 200

Source: Orange County and Western Part of Riverside County, California. Soil Data Version 4, Jan 3, 2008
Please note that this is an approximate locality map, and should not be used for calculations

Habitat Assessment

Gonzales Environmental Consulting LLC (GEC) conducted a habitat assessment for the species listed above. The approximate 127-acre site, plus a 600-foot buffer zone around the perimeter, was surveyed in 2008 and again in 2009 on April 14, 18, and 29; May 9, 15, and 29; June 5, 19, and 29; July 14, and 28; and August 7, 21, and 30, 2009..

Surveys were conducted when the winds were less than 10 miles/hour, and when it was not raining.

TABLE 4
SURVEY SUMMARY

Date	Air Temp (F)	Wind Speed (mph)	Cloud Cover	Precipitation	Time
April 14, 2009	58-63	4	Clear	None	9:00 AM – 11 AM
April 18, 2009	60-75	1	Clear	None	7:00 AM – 11 AM
April 29, 2009	59-63	4	Clear	None	8:00 AM – 11 AM
May 9, 2009	62-74	2	Clear	None	7:30 AM – 10 AM
May 15, 2009	61-71	2	Clear	None	7:30 AM – 11 AM
May 29, 2009	60-68	6	Clear	None	6:45 AM – 11 AM
June 5, 2009	58-63	6	Clear	None	6:30 AM – 11 AM
June 19, 2009	58-72	1	Clear	None	7:00 AM – 10:30 AM
June 29, 2009	62-72	3	Clear	None	6:40 AM – 11:10 AM
July 14, 2009	62-72	3	Clear	None	6:30 AM – 10:30 AM
July 28, 2009	62-76	2	Clear	None	6:15 AM – 10:30 AM
August 7, 2009	58-75	6	Clear	None	6:00 AM – 10 AM
August 21, 2009	63-70	3	Clear	None	6:00 AM – 10 AM
August 30, 2009	64-79	0	Clear	None	6:00 AM – 10 AM

The habitat assessment followed the recommendations of the California Native Plant Society (Nelson 1994). The habitat assessment was performed to determine the Site's suitability to support the species listed above. Several key indicators were used in determining the Site's potential to support the species. Key indicators included the presence of suitable habitat, moisture and soil conditions.

The following indicators observed on-site were:

- Appropriate habitat
- Appropriate moisture conditions

The results of the habitat assessment concluded that the Site contain suitable habitat for white rabbit tobacco, many-stemmed dudleya, and intermediate mariposa-lily.

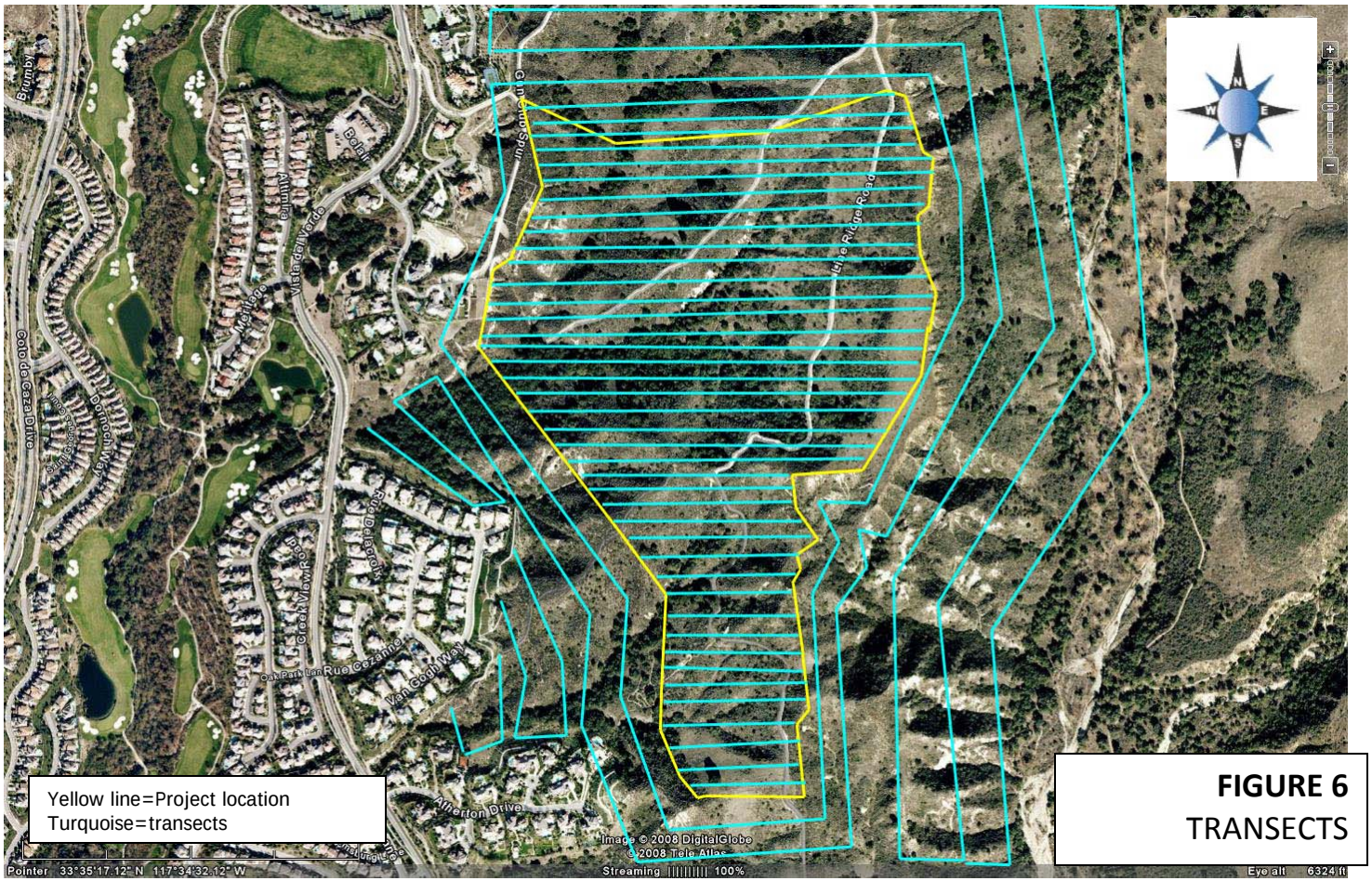

FIGURE 6
TRANSECTS

IV. SURVEY METHODLOGY

Pertinent literature was reviewed to identify local occurrences and habitat requirements of the species. Literature reviewed included compendia provided by resource agencies, California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik, 1994).

Teresa Gonzales, Senior Biologist for Gonzales Environmental Consulting LLC, and Nick Landers, Biologist for Gonzales Environmental Consulting LLC performed botanical surveys of the property. The site visits were not conducted during inclement weather. The site was surveyed along linear transects that were 3' – wide and 3' apart which spanned the length of the site from north to south. These transects were completed until 100% of the project site was assessed. Additionally, "zone of influence" transects were assessed around the perimeter of the site. These transects were situated at 100', 200', 300', and 600'from the site perimeter. The site was examined closely, paying close attention to areas that may support the species identified above, stopping periodically for observations and notations.

This methodology is consistent with recommendations by the California Native Plant Society (Nelson 1994) because it provides more than a "reasonable coverage" of all habitat types and was "floristic in nature." All plant species seen were recorded in field notes.

V. RESULTS

Results of the surveys found many-stemmed dudleya on the Site. Both many-stemmed dudleya and intermediate Mariposa lily were located in an area immediately adjacent to the Site. Like other rain dependent plants, these species are susceptible to damage from ground disturbance activities (*e.g.,* fire abatement). As the survey years (2008 and 2009) were abnormal rainfall years, plants may have not been present due to drought.

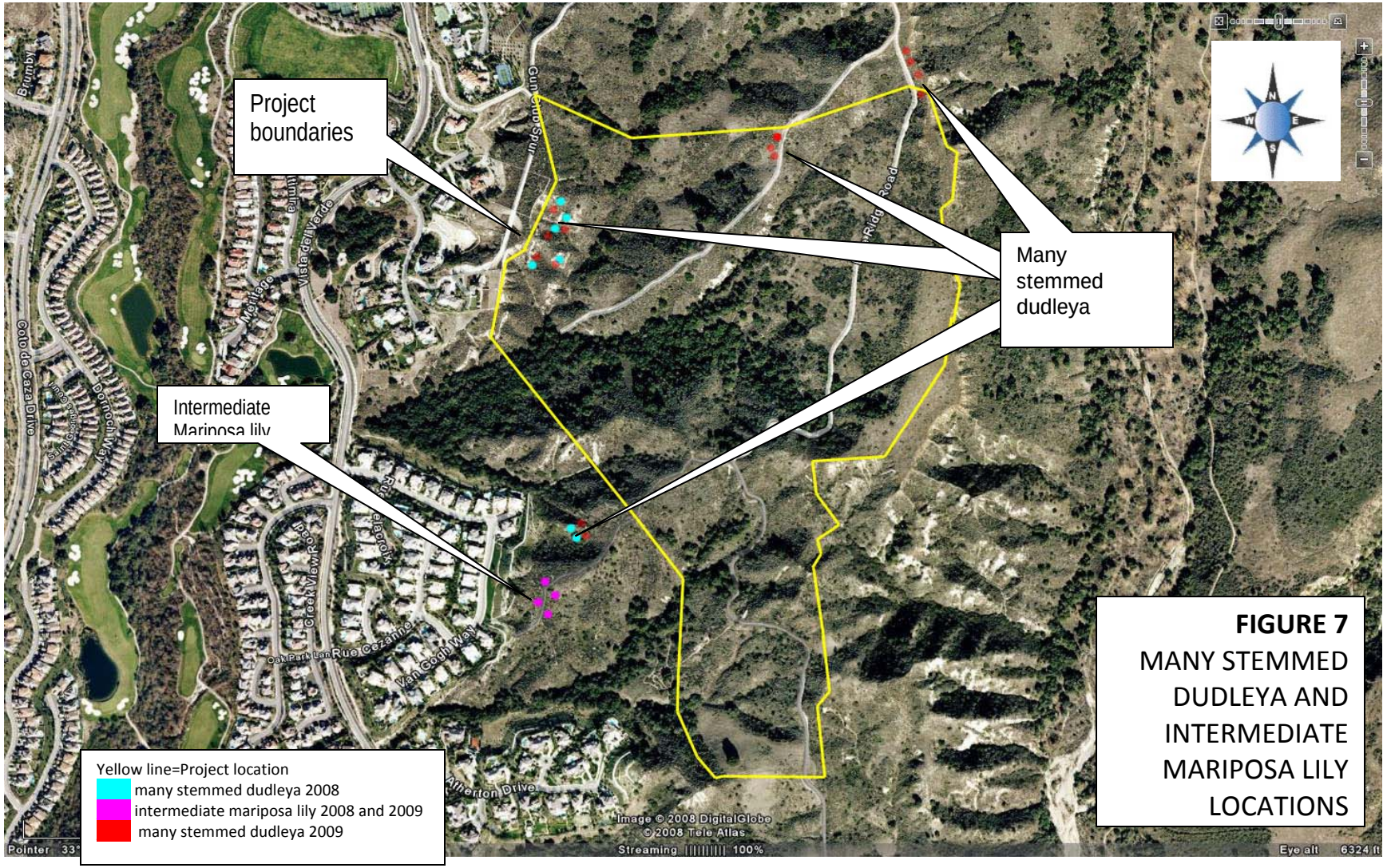

FIGURE 7
MANY STEMMED DUDLEYA AND INTERMEDIATE MARIPOSA LILY LOCATIONS

VI. POTENTIAL IMPACTS & AVOIDANCE RECOMMENDATIONS

The purpose of the botanical survey was to determine the presence or absence of sensitive species and to evaluate the effects of the proposed project conceptual design on these resources. This survey for sensitive plants, followed survey methodology recommended by the California Native Plant Society (Nelson 1994). In particular, the survey was "floristic in nature" and provided a "reasonable coverage" of all habitat types on the site. The field survey consisted of a series of transects to assure sufficient coverage of habitat types. All species seen were identified in the field or collected for identification or confirmation. This information is required to determine whether and in what ways site development could result in adverse effects upon botanical resources.

No species identified as occurring on the project site are listed as threatened or endangered. Many-stemmed dudleya is located on the project site and is a CNPS 1B.2 species. Intermediate mariposa lily is a CNPS 1B.2 species. Intermediate mariposa lily, while not located on the project site, is located in the area that will be disturbed by road construction (as currently designed). GEC has concluded that the proposed action will have high potential to impact threatened or endangered plant species, as the project area may be populated during the interim time between surveys and project construction.

Recommendations

Based on the identified species on the Site and immediately adjacent to the Site, the following mitigation measures are recommended. Recommendations regarding the time period that implementation of the recommended mitigation measures should be completed vary. Therefore, the recommended mitigation measures are organized around that timeline.

- <u>Intermediate Mariposa Lily and Many Stemmed dudleya</u>

Impacts on the many-stemmed dudleya and intermediate Mariposa lily can be mitigated to a level less than significant by one of the following options:

1. Avoidance of all populations of the many stemmed dudleya and intermediate mariposa lily (if located) shall be avoided to the extent possible.

2. If avoidance is not possible then offsite purchase of mitigation sites shall be researched to determine the feasibility of this option. The mitigation sites shall be open space that contain substantial populations of many stemmed dudleya and intermediate Mariposa lily (if located) and shall be dedicated in perpetuity.

3. If Options 1 and 2 above are not viable options, then a mitigation program as follows shall be conducted:

To compensate for the loss of many stemmed dudleya and intermediate Mariposa lily a plan that provides for the establishment of species by transplantation and seeding shall

be developed and implemented by a qualified biologist. The detailed mitigation plan shall be approved by the appropriate agencies prior to issuance of a grading permit and shall include the following requirements.

- Procedures for determining a suitable mitigation site to transplant the plants, bulbs and broadcast lily seeds shall be determined. Field surveys shall be conducted to identify the proposed mitigation site and locate suitable locations for the transplant effort. Proposed sites should not contain an existing population of the intermediate Mariposa lily. The site shall be marked in the field with stakes and flagging.
- A pre-construction survey during the peak flowering period, approximately March-June, shall be conducted by the project biologist. The limits of each impacted location will be clearly delineated with lath and brightly colored flagging. These localities will be monitored once every two weeks, following the end of the flowering period, to determine the suitable time for seed collection. A qualified seed collector will collect all of the seeds from the plants to be impacted when the seeds are ripe. The seeds will be cleaned and stored by a qualified nursery or institution with appropriate storage facilities. Following the seed collection, the bulbs will be dug up and stored by a qualified nursery or institution with appropriate storage facilities. The top 12 inches of topsoil from the plant locations will be scraped, stockpiled, and used in the selected mitigation site.
- Detailed procedures for implementing the transplantation of the many stemmed dudleya and intermediate mariposa lily will be described in the plan. This will include, but will not be limited to trash/weed removal; respreading of native topsoil; soil treatments; and irrigation system modification/repair erosion control.
- Approximately 60 percent of the seeds and bulbs shall be spread/placed at the selected site in the fall following site preparation. Forty percent of the seed and bulbs shall be kept in storage for supplemental planting, in the event of future plant failure.
- A detailed maintenance and monitoring plan will be developed by a qualified biologist. The plan will include detailed descriptions of appropriate maintenance measures, monitoring requirements, and annual report requirements. The project biologist shall have full authority to suspend any operation on the mitigation site which is, in the qualified biologist's opinion, not consistent with the restoration plan. Any disputes regarding the consistency of an action with the restoration plan shall be resolved by the applicant and the biologist.
- The mitigation plan shall provide a series of performance criteria to evaluate the success of the transplantation effort. This shall include requirements for a minimum of 60 percent germination of the number of plants collected. The performance criteria should also include percent cover, density, and seed production requirements. This criteria will be developed by the biologist using a reference population for density. The monitoring period for the impacts shall be five years or until the site is determined a success in coordination with the resource agencies.
- If after the five-year period at least 60 percent of the total number of plants removed by the project have not become established at the mitigation site, then additional mitigation will be required. If after the five-year period at least eighty (80) percent of the total number of plants removed had not developed on the mitigation site, then the material held in storage shall be reseeded/planted into the mitigation site. The

mitigation effort would be considered successful and no additional monitoring would be required.

With implementation of the above program, impacts on many stemmed dudleya and intermediate mariposa lily would be mitigated to a less than significant impact.

- White Rabbit tobacco

  Impacts on white rabbit tobacco should be avoided, if possible. Any impacts to this species would be considered adverse, however not significant under CEQA due to the large distribution and number of locations of this species.

VII. REFERENCES

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FOCUSED SURVEYS FOR
CALIFORNIA GNATCATCHER
APN 125-101-02
Community of Coto de Caza
Orange County, California
Canada Gobernadora Quadrangle
Township 7S, Range 7W, portions of Sections 1 and 2

Prepared For:

Coto de Caza View Estates
Mr. Robert Love
22861 Tindaya
Mission Viejo, CA 92692

Prepared By and Principal Investigator:

GONZALES
ENVIRONMENTAL CONSULTING, LLC

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La Quinta, CA 92253
(760) 777-1621

Report Date: September 25, 2009

TABLE OF CONTENTS

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: September 25, 2009

Signed: 

USFWS Certification: I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Permit #: TE060175-2 Signed: 

SUMMARY

The project proponent proposes to subdivide APN 125-101-02 into approximately 5-15 sections, with associated roads and driveways in the Community of Coto de Caza, Orange County, California.

The proposed project site is located in the southeastern portion of Coto de Caza, adjacent to Starr Ranch. Elevation within the study area ranges from approximately 700 feet to 850 feet.

The site supports native vegetation communities, including coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas.

In April, May, June and July 2008 and again in April, May, June, July, and August 2009 Teresa Gonzales, Principal Biologist for Gonzales Environmental Consulting, LLC (GEC), conducted focused surveys for coastal California gnatcatcher on the proposed project site.

Four pairs of coastal California gnatcatchers were found on the project site or immediately adjacent to it during the surveys. The site is within the Orange County Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP) and outside of the revised critical habitat designation for the coastal California gnatcatcher (USFWS 2007).

I. PROJECT DESCRIPTION

This report summarizes the findings of focused surveys to determine presence or absence of coastal California gnatcatcher (*Polioptila californica californica*) on the Coto de Caza site.

STUDY AREA

The site is located within San Bernardino Meridian in Sections 1 and 2, Township 7 South, and Range 7 West in Orange County, California (Figures 1, 2 and 3). This location is shown on the Canada Gobernadora, California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Canada Gobernadora 1979); page 923 (blocks 2D, and 3D) of the current Orange County Street Guide and Directory (Thomas Brothers Maps Design 2007). The approximate center of the site is located at 33.3532.44°N, 117.3427.87°W.

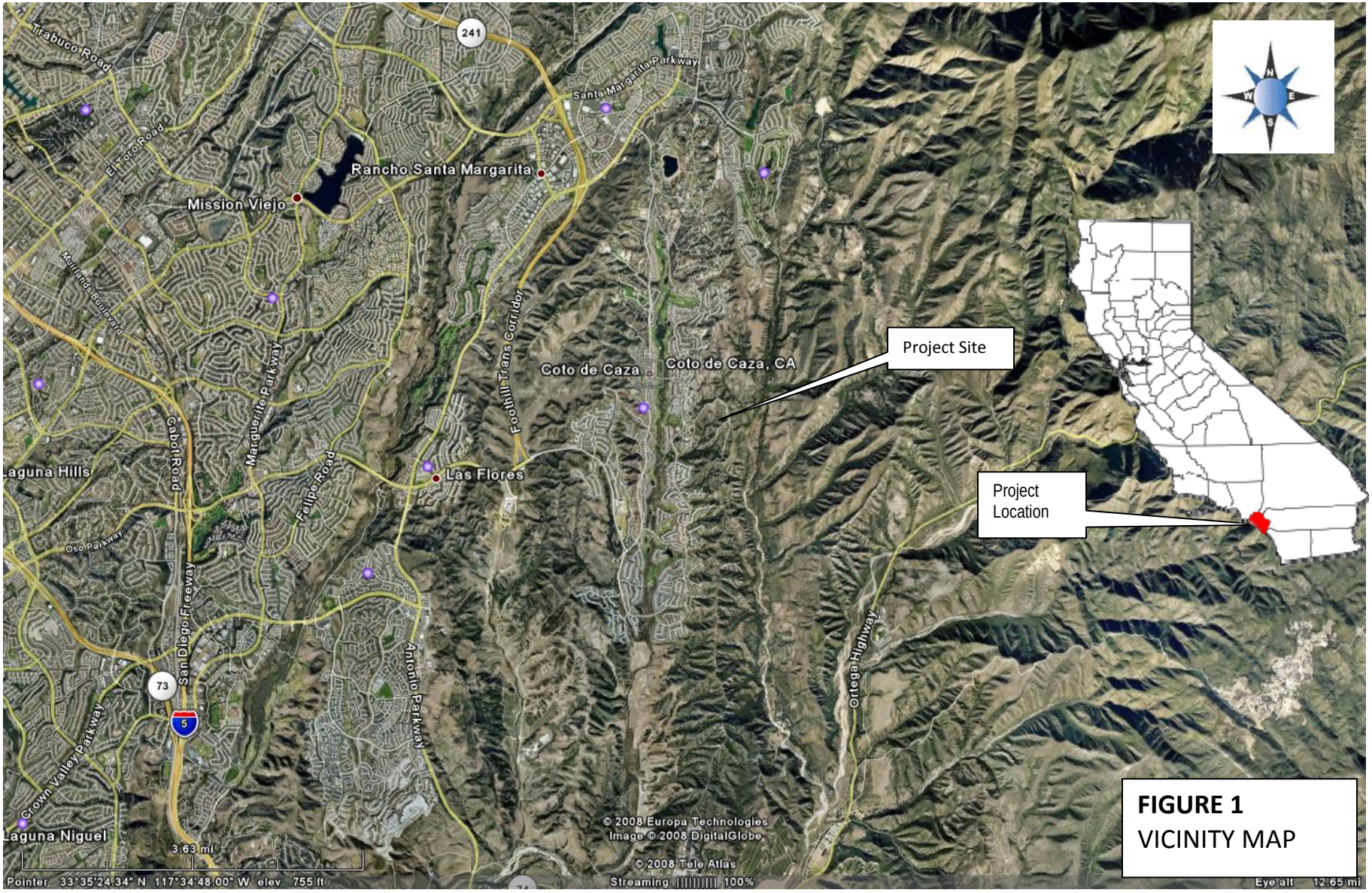
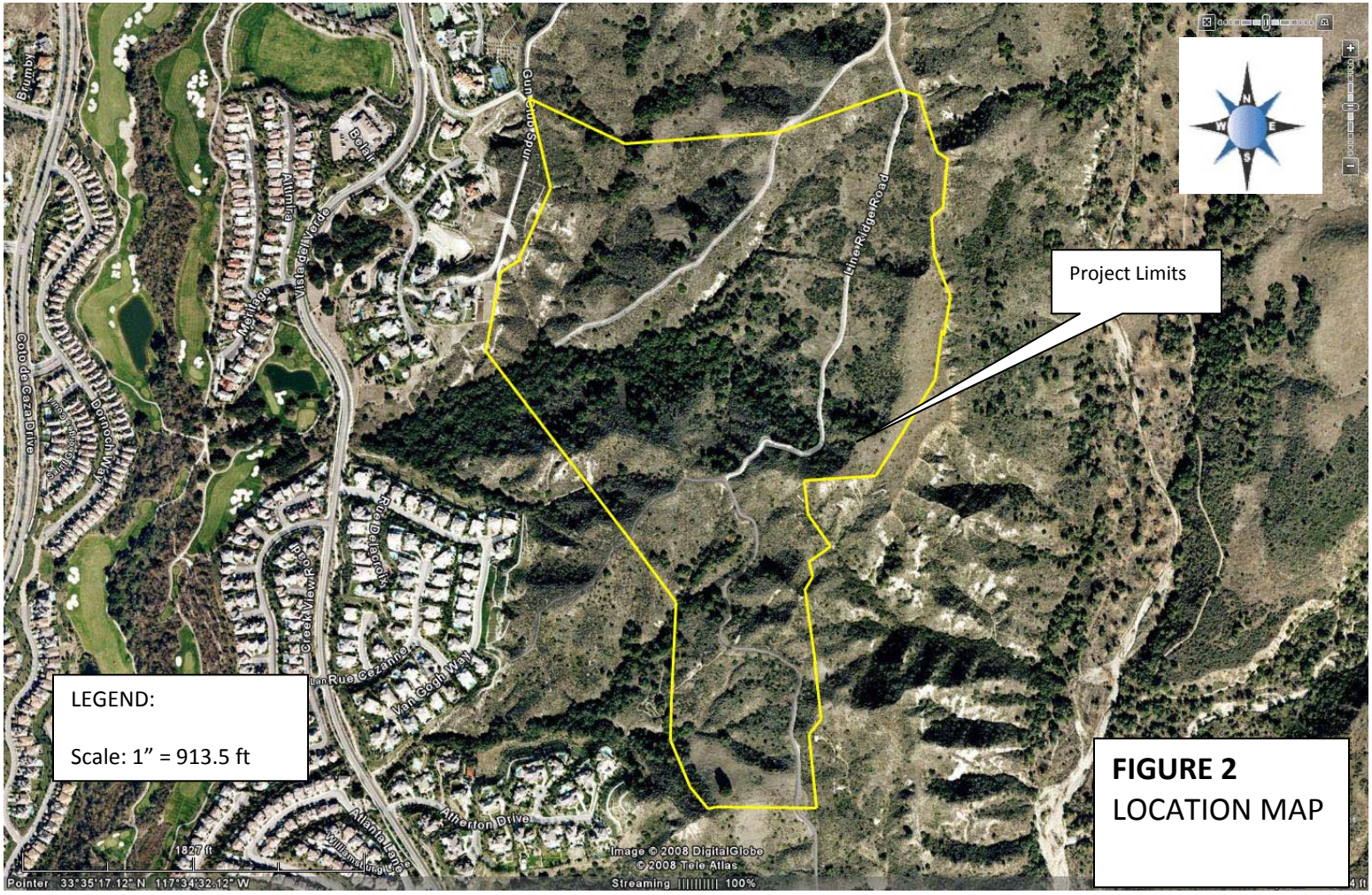
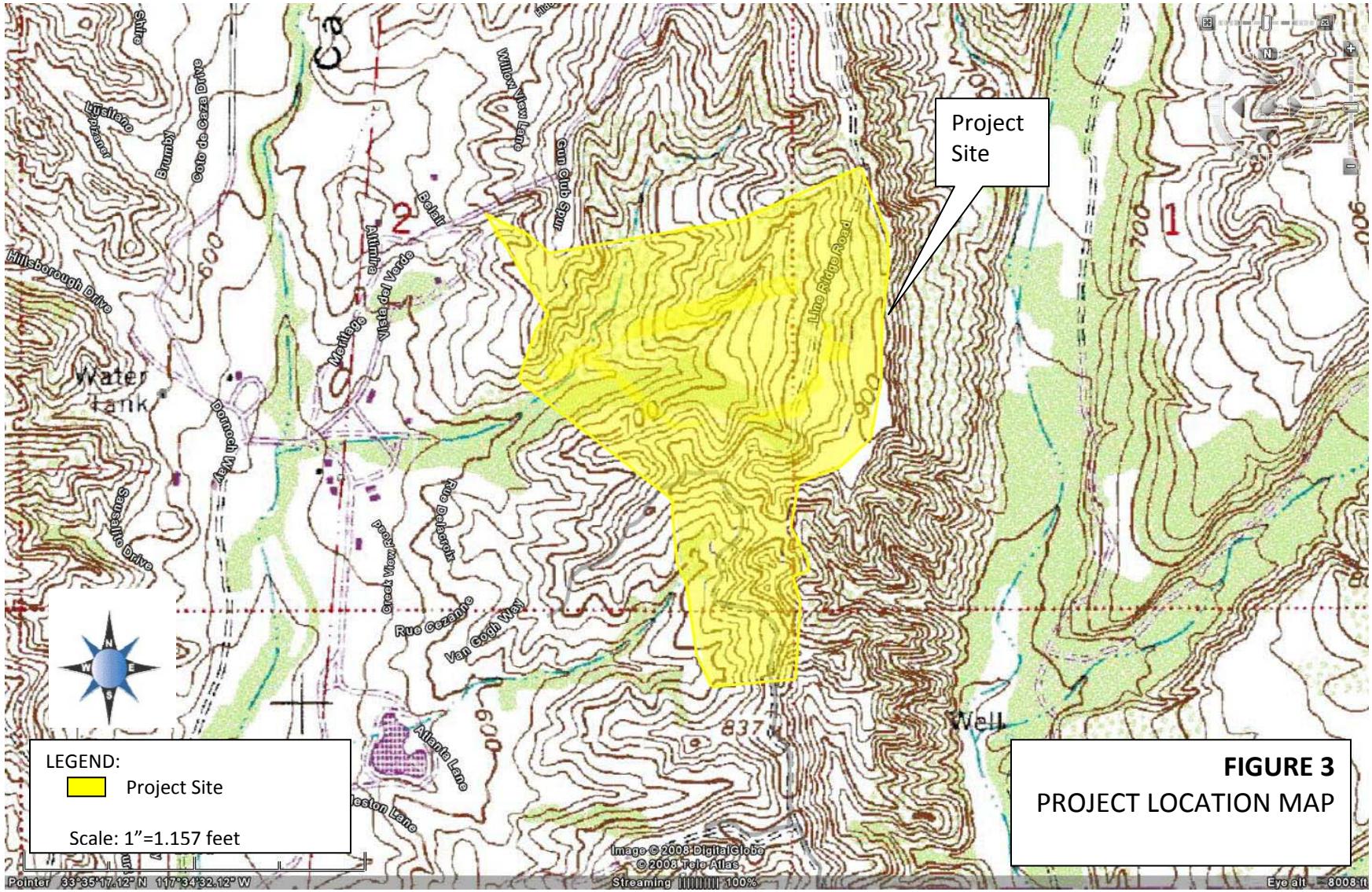


FIGURE 1
VICINITY MAP



Please note that this is an approximate locality map, and should not be used for calculations



Please note that this is an approximate locality map, and should not be used for calculations

This report was authorized via subcontract with Coto de Caza View Estates. Teresa Gonzales was the biologist for this project. Paul Gonzales also assisted. Field surveys in 2009 for California gnatcatcher were conducted on April 14, 18, and 29; May 9, 15, and 29; June 5, 19, and 29; July 14, and 28; and August 7, 21, and 30, 2009.

II. STUDY AREA CONDITIONS

The following sections summarize the study area conditions. For purposes of this report, the term study area includes the proposed project construction limits and a surrounding 1,300-foot buffer (Figure 3).

Physical Conditions

Elevations in the project area vary from approximately 700 feet to 850 feet. The site is in a foothill area with headwaters of two intermittent drainages in the northern and southern portion of the project sit. The drainages and drainage edges, and portions of the uplands, support a mix of vegetation communities (coast live oak woodland, coastal sage scrub, chaparral, needlegrass, non-native grasslands and disturbed areas) that typically support a diversity of wildlife species, particularly birds. The drainages supports coast live oak woodland and coastal sage scrub.

The biological conditions in the areas that were surveyed for this biological resources assessment vary somewhat depending upon the patchiness of the oak woodland habitat. The oak woodland areas provide important foraging, cover, and nesting opportunities for wildlife. The habitat is typical of southern California alluvial systems, which has braided open areas between patches of vegetation.

Definitions

Vegetation Communities

Vegetation habitats or communities are assemblages of plant species that usually coexist in the same area. The classification of vegetation communities is based upon the life form of the dominant species within the community and the associated flora. The nomenclature for vegetation communities follows Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986), as modified by Oberbauer (1996).

Wildlife Habitats

Wildlife habitats differ from vegetation communities in that a wildlife habitat may contain several vegetation communities that are similar in structure but different in the plant species composition, location, and soil substrate. This distinction becomes an important factor when assessing the sensitivity of a particular wildlife habitat to impacts. In addition, the interaction of various wildlife species occurs between many different wildlife habitats. This becomes more evident where these habitats overlap in areas known as ecotones. These ecotones support a combination of species from two or more adjoining habitats that generally increases the number and diversity of species within these areas. Wildlife habitats encountered on the project site approximate the vegetation communities discussed is this report.

Vegetation

The project site is comprised of coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas. Residential areas consisting of medium density single family homes occur west of the project site. Both unnamed drainages drain into the residential area. In addition to the residential areas noted as Developed on the vegetation community map, disturbed areas also occur throughout the project site. Starr Ranch lies on the east side of the project site.

COASTAL SAGE SCRUB

Coastal sage scrub is represented by several major associations that occur discontinuously from the San Francisco Bay area south to El Rosario in Baja California, Mexico. Coastal sage scrub is dominated by a characteristic suite of low-statured, aromatic, drought- deciduous shrubs and subshrub species. Composition varies substantially depending on physical circumstances and the successional status of the vegetation community. Characteristic species include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), California encelia (*Encelia californica*), and several species of sage (*e.g., Salvia mellifera, Salvia apiana*) (Holland). Other common species include brittlebush (*Encelia farinosa*), lemonadeberry (*Rhus integrifolia*), sugarbush (*Rhus ovata*), Mexican elderberry (*Sambucus mexicana*), sweetbush (*Bebbia juncea*), boxthorn (*Lycium* spp.), prickly-pear (*Opuntia littoralis*), coastal cholla (*Opuntia prolifera*), tall prickly-pear (*Opuntia oricola*), and several

species of live forever (*Dudleya*).

The more open nature of the canopy permits persistence of a diverse herbaceous component of forbs, grasses, and succulents in mature stands than usually is associated with chaparral. It often is mixed with chaparral and grassland communities and the distinct boundaries between each can sometimes be difficult to delineate (Draft NCCP).

ANNUAL (NON-NATIVE) GRASSLAND

Non-native grassland is characterized by a sparse to dense cover of annual grasses typically up to two feet tall, with many annual wildflowers also present in years with favorable rainfall. This vegetation community typically occurs on fine-textured soils that are moist or wet in the winter and very dry during summer and fall. Plant species present typically include wild oat (*Avena* spp.), bromes (*Bromus* spp.), tarweeds (*Centromadia* spp., *Deinandra* spp.), and filarees (*Erodium* spp.) (Holland 1986). In Orange County, annual grasslands often occur where the native habitat has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities. Annual grasslands in the project area are dominated by bromes (*Bromus madritensis*, *Bromus diandrus, and Bromus hordaceous*), wild oats (*Avena barbata, Avena fatua*), rat-tail fescue, barleys (*Hordeum* spp.) and Italian ryegrass. Annual forbs include tocalote, common fiddleneck (*Amsinckia menziesii*), popcornflower (*Plagiobothrys* spp.), black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), common catchfly, stickwort (*Spergularia arvensis*), miniature lupine (*Lupinus bicolor*), white-whorl lupine (*Lupinus densiflorus var. austocollium*), burclover (*Medicago polymorpha*), bristled clover (*Trifolium hirtum*), red- stemmed filaree, white-stemmed filaree (*Erodium moschatum*), and fluellin (*Kickxia elatine*).

VALLEY NEEDLEGRASS GRASSLAND

Valley needlegrass grassland is a mid-height (to 2 feet) grassland dominated by perennial, tussock-forming purple needlegrass (*Stipa pulchra*). Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover. Usually on fine-textured (often clay) soils, moist or even waterlogged during winter, but very dry in summer. Often intergrades with oak woodlands on moister, better drained sites (Holland). In the project area valley needlegrass grassland is determined when there is more than 10 percent cover of purple needlegrass (*Nassella pulchra*). It is associated with the annual grasses listed above, leafy bentgrass (*Agrostis pallens*), junegrass (*Koeleria macrantha*), cane bluestem (*Bothriochloa barbiodis*), coast range melic (*Melica imperfecta*) and annual forbs such as common goldenstar (*Bloomeria crocea*), blue dicks, Cleveland's goldenstar (*Dodecatheon clevelandii*), smooth cat's-ear (*Hypocharis glabra*), lilac mariposa lily (*Calochortus splendens*), many-stemmed dudleya (*Dudleya multicaulis*), blue-eyed grass (*Sisyrinchium bellum*) and rosin weed (*Calycadenia truncata*)(Draft NCCP).

CHAMISE CHAPARRAL

Chamise chaparral is a 1-3 meter tall chaparral overwhelmingly dominated by chamise. Associated species contribute little to cover. It is adapted to repeated fires by stump

sprouting. Mature stands are densely interwoven with very little herbaceous understory or litter. This chaparral is found on dry soils on xeric slopes and ridges. Some typical plant species include chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos glauca*), ceanothus (*Ceanothus cuneatus*), scrub oak (*Quercus dumosa*), sugar bush (*Rhus ovata*), white sage (*Salvia apiana*), and chaparral yucca (*Yucca whipplei*).

COAST LIVE OAK WOODLAND

Coast Live Oak Woodland is typically found on north-facing slopes and shaded ravines below 4000 feet. This oak woodland is dominated by the Coast Live Oak (*Quercus agrifolia*), which is evergreen and reaches 10-25 meters in height. The shrub layer is poorly developed, but may include Toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes spp.*), laural sumac (*Rhus laurina*), or elderberry (*Sambucus mexicana*). The herb layer is continuous and dominated by brome grass (*Bromus diandrus*) and several other non-native species. Other typical species include California buckeye *(Aesculus californica*), coffee berry (*Rhamnus californica*), poison oak (*Toxicodendron diversilobum*), and California sagebrush (*Artemisia californica*).

DISTURBED

The disturbed areas include all dirt roads located on the project site. Disturbed habitat refers to land that has been permanently altered by previous human activity that has eliminated all future biological value of the land for most species. The native or naturalized vegetation is no longer present and the land lacks habitat value for sensitive wildlife, including potential raptor foraging. This area has no habitat value.

Wildlife

Wildlife species observed or detected in the survey area were characteristic of those that would be expected to occupy habitats in the region. Below is a discussion of the terrestrial wildlife observed or expected that primarily utilize the uplands and oak woodland habitats.

These species include California gnatcatcher, cactus wren, wrentit (*Chamaea fasciata*), greater roadrunner (*Geococcyx californianus*), bushtit (*Psaltriparus minimus*), spotted towhee (*Pipilo erythrophthalmus*), California thrasher (*Toxostoma redivivum*), black-chinned sparrow (*Spizella atrogularis*), grasshopper sparrow (*Ammodramus savannarum*), Savannah sparrow (*Passerculus sandwichensis*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), loggerhead shrike (*Lanius ludovicianus*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*).

Bats occur throughout most of southern California and are using the area as foraging habitat. The gaps in peeling bark and hollow snags or limbs and rock outcroppings provide potential roosting and maternal colony opportunities for bat species.

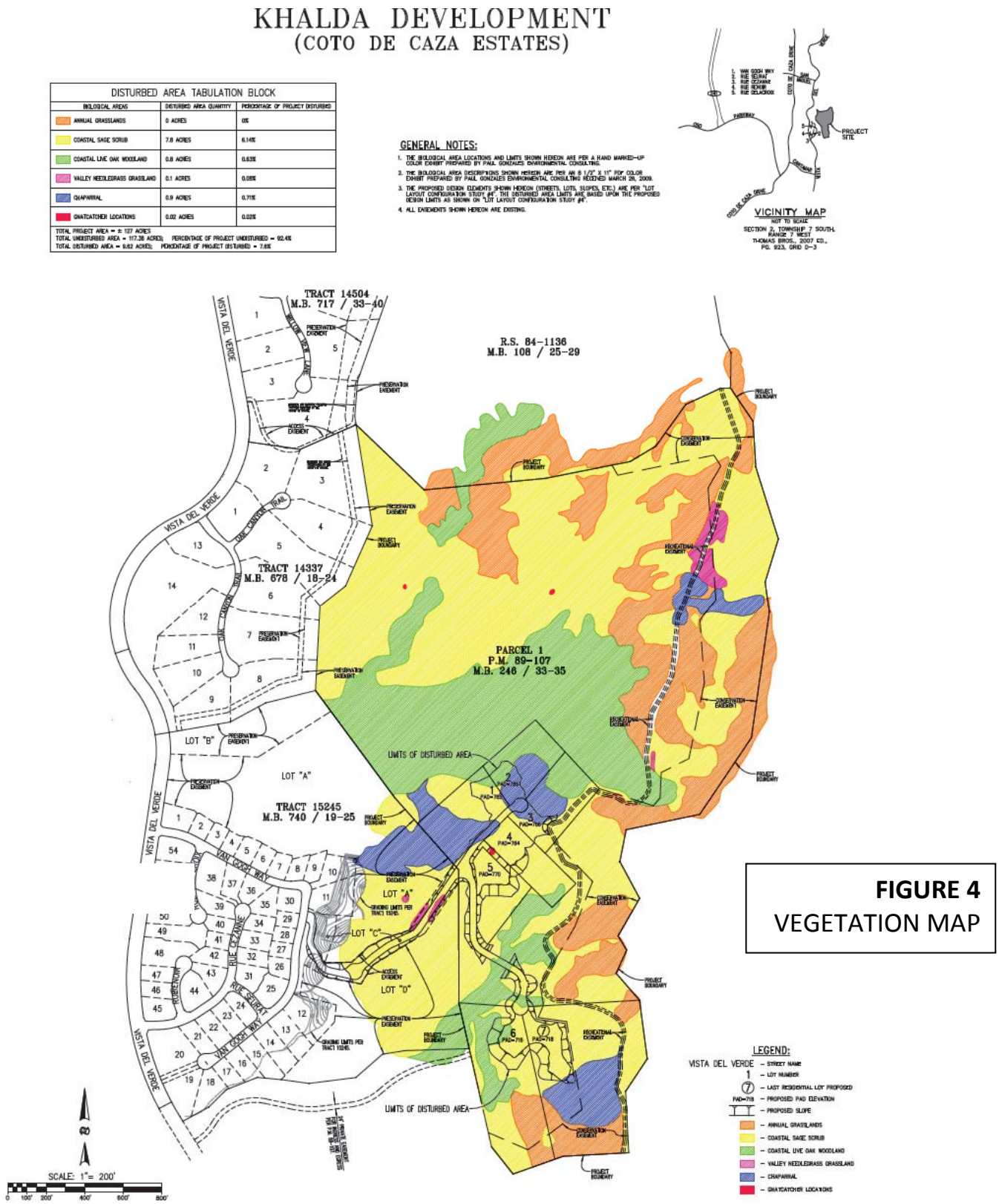


FIGURE 4
VEGETATION MAP

III. COASTAL CALIFORNIA GNATCATCHER FOCUSED SURVEY

Background

Coastal California Gnatcatcher

The coastal California gnatcatcher (gnatcatcher), a subspecies of the California gnatcatcher, is a small member of the thrush family (Muscicapidae). The gnatcatcher typically occurs in or near sage scrub habitat, which is a broad category of vegetation that includes the following plant communities as classified by Holland (1986): Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. Coastal sage scrub is composed of relatively low-growing, dry-season deciduous, and succulent plants. Characteristic plants of this community include California sagebrush (*Artemisia californica*), various species of sage (*Salvia* sp.), California buckwheat (*Eriogonum fasciculatum*), lemonadeberry (*Rhus integrifolia*), California encelia (*Encelia californica*), and *Opuntia* spp. Ninety-nine percent of all gnatcatcher locality records occur at or below an elevation of 984 feet (Atwood 1990).

Coastal sage scrub is patchily distributed throughout the range of the gnatcatcher, and the gnatcatcher is not uniformly distributed within the structurally and floristically variable coastal sage scrub community. Rather, the subspecies tends to occur most frequently within the California sagebrush-dominated stands on mesas, gently sloping areas, and along the lower slopes of the coast ranges (Atwood 1990). An analysis of the percent gap in shrub canopy supports the general impression that gnatcatchers prefer relatively open stands of coastal sage scrub (Bontrager 1991). The gnatcatcher occurs in high frequencies and densities in scrub with an open or broken canopy while it is absent from scrub dominated by tall shrubs and occurs in low frequencies and densities in low scrub with a closed canopy (Weaver 1998). The territory size increases as vegetation density decreases and with distance from the coast, probably due to food resource availability. Thus, gnatcatchers will use even sparsely vegetated coastal sage scrub for shelter and to forage for insects as long as perennial shrubs are available (ERCE 1990).

Gnatcatchers also use chaparral, grassland, and riparian habitats where they occur adjacent to sage scrub (Bontrager 1991). The use of these habitats appears to be most frequent during late summer, autumn, and winter, with smaller numbers of birds using such areas during the breeding season. These non-sage scrub habitats are used for dispersal, but data on dispersal use are largely anecdotal (Bowler 1995; Campbell et al. 1995). Although existing quantitative data may reveal relatively little about gnatcatcher use of these other habitats, these areas may be critical during certain times of the year for dispersal or as foraging areas during drought conditions (Campbell et al. 1998). Breeding territories have also been documented in non-sage scrub habitat. Campbell et al. (1998) discuss likely scenarios explaining why non-CSS

is used by gnatcatchers including food source availability, dispersal areas for juveniles, temperature extremes, fire avoidance, and lowered predation rate for fledglings.

Environmental, vegetational, and food-abundance characteristics are important aspects of territory quality, however, they are related to the time of year when the evaluation is made (Redak et al. 1997). Based on the studies of Redak et al. (1997) during the breeding season, habitat use was negatively associated with distance to the coast and the elevation of the territory. The habitat use was positively associated with the abundance of adult stages of beetles, flies, spiders and larval stages of all arthropods. Plots with high densities of California sagebrush, flat-topped buckwheat, and white sage were also used by birds. In contrast, during the nonbreeding season, the correlation of habitat use with vegetation and location variables remained but the correlation was no longer present with the arthropod communities (UCR).

Due to the threats to the population, U.S. Fish and Wildlife Service (USFWS) listed the California gnatcatcher as threatened on March 30, 1993 (58 FR 16742), draft designation of critical habitat on October 24, 2000 (65 FR 5946 - 5976) and final designation of critical habitat on Dec. 19, 2007 (72 FR 72010).

Methods

Gonzales Environmental Consulting (GEC) biologist Teresa Gonzales performed the surveys, which were carried out according to USFWS protocol (USFWS 1997). Ms. Gonzales has a permit (TE-060175-2, expires 1 December 2011) authorized by the USFWS to perform such surveys for the coastal California gnatcatcher.

Surveys included all habitats within the area potentially supporting coastal California gnatcatchers that may be directly or indirectly affected by the impacts of the project. A minimum width of a ¼ mile distance from the project site was surveyed. Suitable habitat was surveyed on foot by walking slowly and methodically along existing trails when possible. The suitable habitat areas were searched quietly using binoculars and listening for the songs of the birds. When no observations were made, tape vocalizations of the coastal California gnatcatcher were played in appropriate habitat. Information on habitat characteristics, locality and weather conditions were recorded onto field forms and mapped.

Weather conditions during surveys were generally conducive to a high level of bird activity. If weather conditions were not conducive to bird activity surveys were cancelled or not conducted.

The number of surveys conducted within active NCCP areas is based on the prior recommended guidelines and the fact that, through the interim section 4(d) process, loss of coastal sage scrub requires mitigation on a habitat basis, regardless of whether habitat is occupied by coastal California gnatcatchers. From February 15 and August 30, a minimum of three (3) surveys shall be conducted at least one week apart, to determine presence/absence of coastal California gnatcatchers. Whenever possible, additional surveys should be conducted. Any deviation from this protocol will require concurrence from the Service.

During these surveys use of vocalization tapes of prerecorded calls of the coastal California gnatcatcher is part of the survey protocol. Methods for the surveys consisted of walking through habitat at the site that is considered appropriate for this species, i.e., sage scrub and chaparral. Simultaneously with walking the habitat, the biologist doing the survey watches and listens for wildlife, observing any indirect signs of species presence. "Pishing," a vocal technique commonly used to attract passerines (songbirds) and draw them into view, was occasionally employed. Binoculars (8.5 x 44) were used to assist in the detection and identification of any sighted wildlife. In accordance with survey protocol, taped vocalizations of the coastal California gnatcatcher species were occasionally played. The size of the property and the extent of appropriate habitat are such that the site required repeat surveys due to the size of the site (over 100 acres).

The schedule and field conditions during the visits are summarized below.

Table 1

Survey Summary Coastal California Gnatcatcher

Date	Air Temp (F)	Wind Speed (mph)	Cloud Cover	Precipitation	Time
April 14, 2009	58-63	4	Clear	None	9:00 AM – 11 AM
April 18, 2009	60-75	1	Clear	None	7:00 AM – 11 AM
April 29, 2009	59-63	4	Clear	None	8:00 AM – 11 AM
May 9, 2009	62-74	2	Clear	None	7:30 AM – 10 AM
May 15, 2009	61-71	2	Clear	None	7:30 AM – 11 AM
May 29, 2009	60-68	6	Clear	None	6:45 AM – 11 AM
June 5, 2009	58-63	6	Clear	None	6:30 AM – 11 AM
June 19, 2009	58-72	1	Clear	None	7:00 AM – 10:30 AM
June 29, 2009	62-72	3	Clear	None	6:40 AM – 11:10 AM
July 14, 2009	62-72	3	Clear	None	6:30 AM – 10:30 AM
July 28, 2009	62-76	2	Clear	None	6:15 AM – 10:30 AM
August 7, 2009	58-75	6	Clear	None	6:00 AM – 10 AM
August 21, 2009	63-70	3	Clear	None	6:00 AM – 10 AM
August 30, 2009	64-79	0	Clear	None	6:00 AM – 10 AM

Results

Habitat assessment for the coastal California gnatcatcher found suitable habitat on the site (coastal sage scrub). Four pairs of coastal California gnatcatcher were found on the project site or in immediate areas.

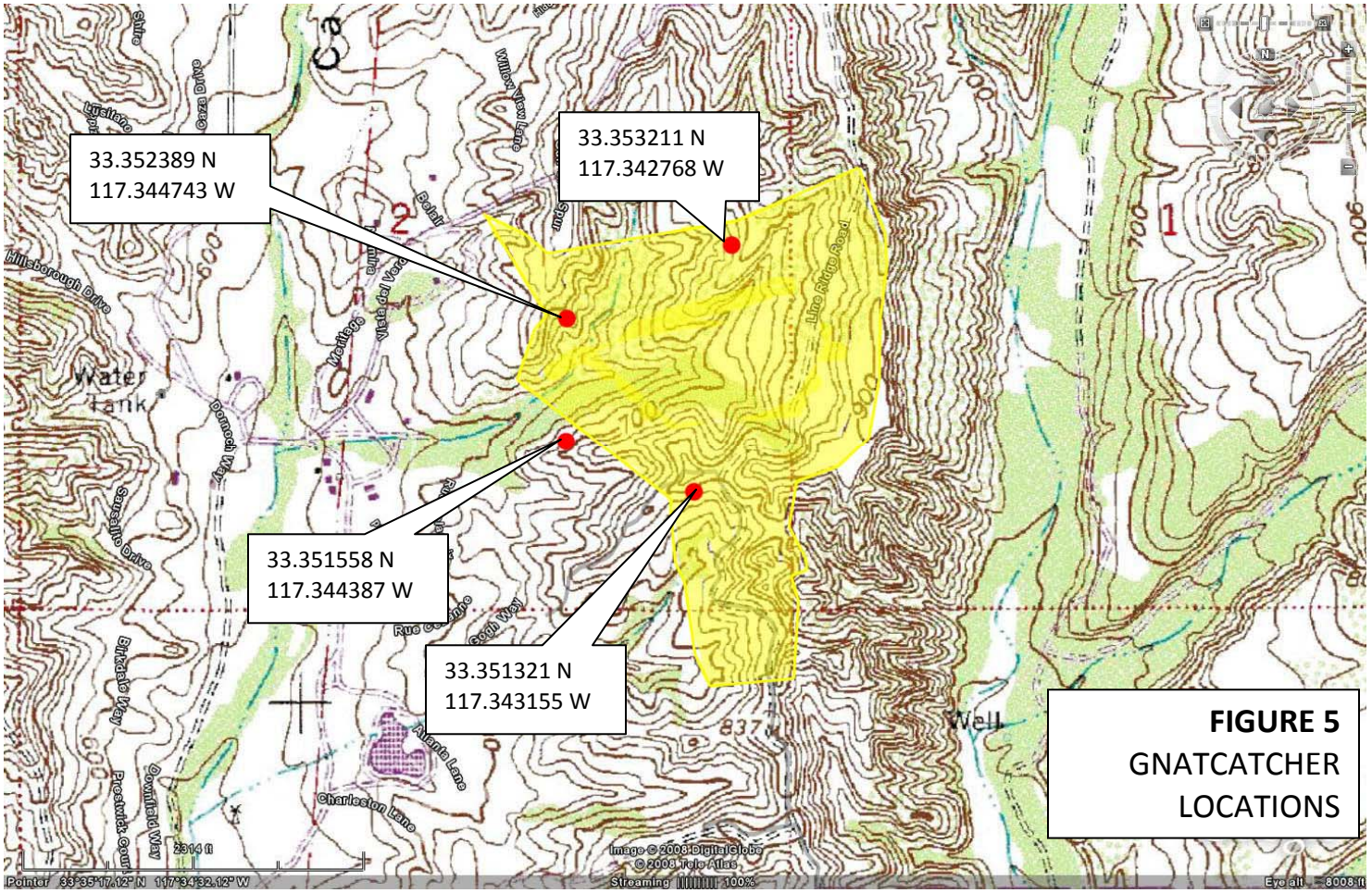


FIGURE 5
GNATCATCHER
LOCATIONS

KHALDA DEVELOPMENT
(COTO DE CAZA ESTATES)

DISTURBED AREA TABULATION BLOCK		
BIOLOGICAL AREAS	DISTURBED AREA QUANTITY	PERCENTAGE OF PROJECT DISTURBED
ANNUAL GRASSLANDS	0 ACRES	0%
COASTAL SAGE SCRUB	7.8 ACRES	6.14%
COASTAL LIVE OAK WOODLAND	0.8 ACRES	0.63%
VALLEY NEEDLEGRASS GRASSLAND	0.1 ACRES	0.08%
CHAPARRAL	0.9 ACRES	0.71%
GNATCATCHER LOCATIONS	0.02 ACRES	0.02%

TOTAL PROJECT AREA = ± 127 ACRES
TOTAL UNDISTURBED AREA = 117.38 ACRES; PERCENTAGE OF PROJECT UNDISTURBED = 92.4%
TOTAL DISTURBED AREA = 9.62 ACRES; PERCENTAGE OF PROJECT DISTURBED = 7.6%

GENERAL NOTES:

1. THE BIOLOGICAL AREA LOCATIONS AND LIMITS SHOWN HEREON ARE PER A HAND MARKED-UP COLOR EXHIBIT PREPARED BY PAUL GONZALES ENVIRONMENTAL CONSULTING.
2. THE BIOLOGICAL AREA DESCRIPTIONS SHOWN HEREON ARE PER AN 8 1/2" X 11" PDF COLOR EXHIBIT PREPARED BY PAUL GONZALES ENVIRONMENTAL CONSULTING RECEIVED MARCH 26, 2009.
3. THE PROPOSED DESIGN ELEMENTS SHOWN HEREON (STREETS, LOTS, SLOPES, ETC.) ARE PER "LOT LAYOUT CONFIGURATION STUDY #4". THE DISTURBED AREA LIMITS ARE BASED UPON THE PROPOSED DESIGN LIMITS AS SHOWN ON "LOT LAYOUT CONFIGURATION STUDY #4".
4. ALL EASEMENTS SHOWN HEREON ARE EXISTING.

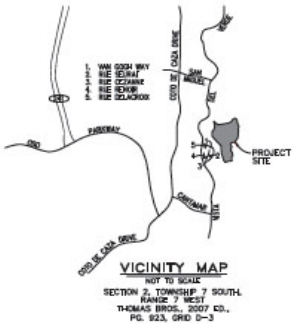
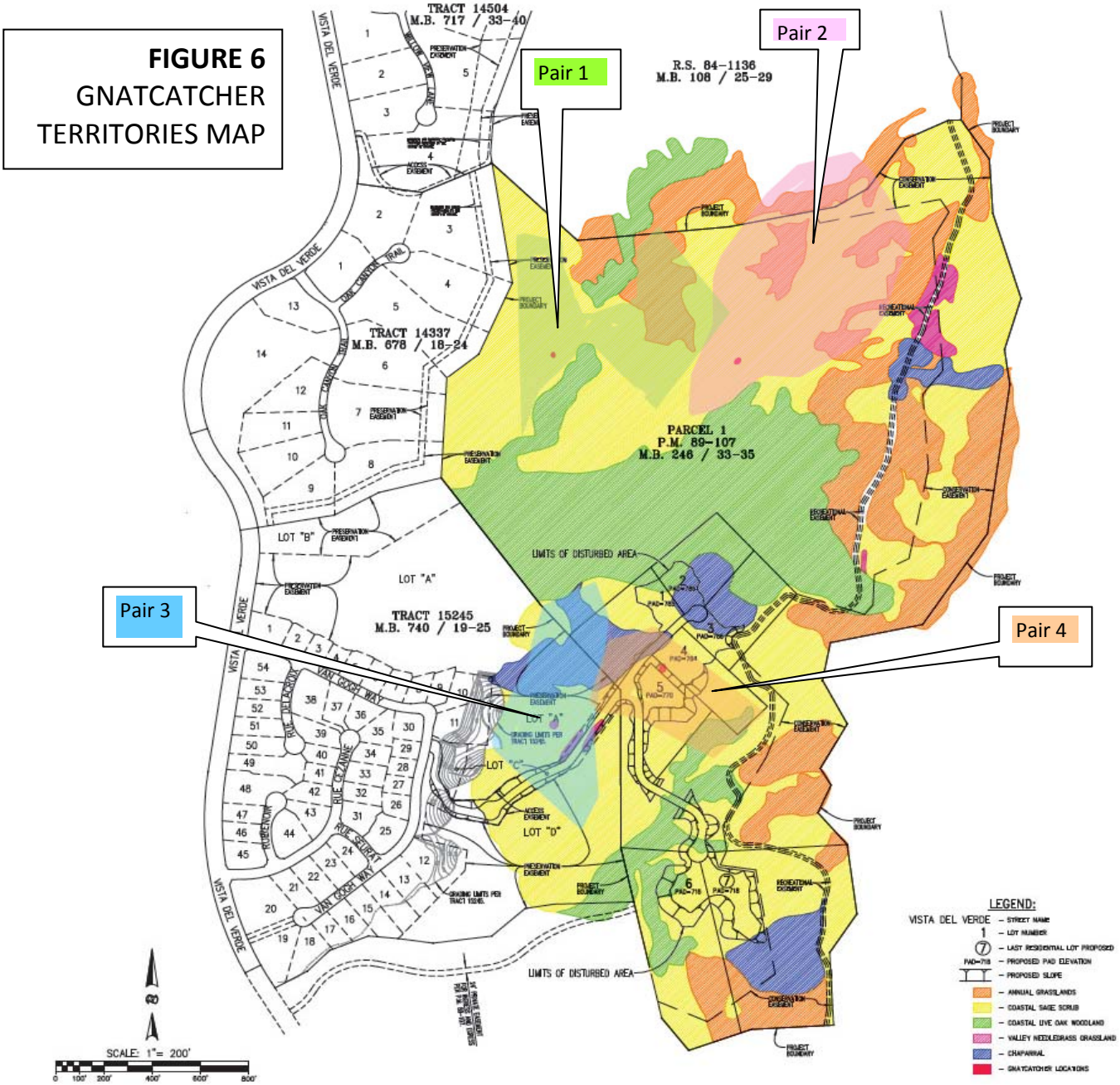


FIGURE 6
GNATCATCHER TERRITORIES MAP



Conclusions

Vegetation on the project site provides suitable nesting and territorial habitat for the coastal California gnatcatcher. Sage scrub habitat is present and the diversity appears to be adequate to support the species. Therefore, this species is nesting and territorializing on the project site and using immediately adjacent areas. Territories remain basically the same as the surveys conducted in 2008. A field meeting with Ken Cory and Christine Medek from USFWS was held on May 13, 2009. During that meeting, preference for development to occur in the southern portion of the project site was indicated by USFWS.

The site is within the Orange County Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP) and outside of the revised critical habitat designation for the coastal California gnatcatcher (USFWS 2007).

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ATTACHMENT A
WILDLIFE COMPENDIUM

SCIENTIFIC NAME	COMMON NAME
AVES	BIRDS
ACCIPITRIDAE	HAWKS, EAGLES, HARRIERS, OSPREY
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
AEGITHALIDAE	BUSHTITS
Psaltriparus minimus	Bushtit
CATHARTIDAE	VULTURES
Cathartes aura	Turkey vulture
CERTHIIDAE	GNATCATCHERS
Polioptila californica californica	Coastal California gnatcatcher
CHARADRIIDAE	PLOVERS
Charadrius vociferus	Killdeer
COLUMBIDAE	PIGEONS AND DOVES
*Columba livia**	Rock dove
Zenaida macroura	Mourning dove
CORVIDAE	CROWS AND JAYS
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
CUCULIDAE	CUCKOOS
Geococcyx californianus	Greater roadrunner
EMBERIZIDAE	SPARROWS, WARBLERS, TANAGERS
Aimophila ruficeps	Rufous-crowned sparrow
Melospiza melodia	Song sparrow
Pipilo crissalis	California towhee
Passerculus sandwichensis	Savannah sparrow
Spizella atrogularis	Black-chinned sparrow
Ammodramus savannarum	Grasshopper sparrow
Chondestes grammacus	Lark sparrow
Pipilo maculatus	Spotted towhee
FALCONIDAE	FALCONS
Falco sparverius	American kestrel
FRINGILLIDAE	FINCHES
Carpodacus mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
Carduelis tristis	American goldfinch
HIRUNDINIDAE	SWALLOWS
Stelgidopteryx serripennis	Northern rough-winged swallow
Tachycineta thalassina	Violet green swallow
Hirundo pyrrhonota	Cliff swallow
ICTERIDAE	BLACKBIRDS
Euphagus cyanocephalus	Brewer's blackbird
Sturnella neglecta	western meadowlark
Molothrus ater	Brown-headed cowbird
LANIIDAE	SHRIKES
Lanius ludovicianus	Loggerhead shrike
MIMIDAE	MOCKINGBIRDS AND THRASHERS
*Toxostoma redivivum***	California thrasher
Mimus polyglottos	Northern mockingbird
PASSERIDAE	WEAVERS

SCIENTIFIC NAME	COMMON NAME
*Passer domesticus**	House sparrow
PHASIANIDAE	GROUSE AND QUAIL
Callipepla californica	California quail
PICIDAE	WOODPECKERS
Colaptes auratus	Northern flicker
Melanerpes formicivorus	Acorn woodpecker
Picoides nutallii	Nuttall's woodpecker
PTILOGONATIDAE	SILKY FLYCATCHERS
Phainopepla nitens	Phainopepla
STRIGIDAE	TYPICAL OWLS
Otus kennicottii	Western screech-owl
Bubo virginianus	Great horned owl
STURNIDAE	STARLINGS
*Sturnus vulgaris**	European starling
SYLVIIDAE	GNATCATCHERS
*Polioptila californica californica***	Coastal California gnatcatcher
TIMALIIDAE	WRENTITS
Chamaea fasciata	Wrentit
TROCHILIDAE	HUMMINGBIRDS
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
TROGLODYTIDAE	WRENS
Thryomanes bewickii	Bewick's wren
Campylorhynchus brunneicapillus	Cactus wren
Salpinctes obsoletus	Rock wren
TYRANNIDAE	TYRANT FLYCATCHERS
Contopus sordidulus	Western wood-pewee
Myiarchus cinerascens	Ash-throated flycatcher
Sayornis nigricans	Black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	Western kingbird
TYTONIDAE	BARN OWLS
Tyto alba	Common barn-owl

Alien species indicated by asterisk, special status species indicated by two asterisks. This list includes species observed on the site. Others may have been overlooked or unidentifiable due to season.

SCIENTIFIC NAME	COMMON NAME
CLASS MAMMALIA	MAMMALS
LEPORIDAE	HARES AND RABBITS
Sylvilagus audubonii	Desert cottontail (observed)
Lepus californicus	California jackrabbit (observed)
SCIURIDAE	SQUIRRELS
Spermophilus beecheyi	California ground squirrel (observed)
CANIDAE	DOGS/WOLVES/FOXES
Canis latrans	Coyote (observed)

Alien species indicated by asterisk, special status species indicated by two asterisks. This list includes species observed on the site. Others may have been overlooked or unidentifiable due to season.

ATTACHMENT B
BOTANICAL COMPENDIUM

Scientific Name	Common Name
VASCULAR PLANTS	
ANGIOSPERMS (DICOTYLEDONS)	
ANACARDIACEAE	SUMAC FAMILY
Malosma laurina	Laurel Sumac
Rhus integrifolia	Lemonadeberry
Rhus ovata	Sugar bush
Toxicodendron diversilobum	Poison oak
ASTERACEAE	SUNFLOWER FAMILY
Artemisia californica	California sagebrush
Artemisia douglasiana	Mugwort
Baccharis salicifolia	Mulefat
Brickellia californica	California brickellia
Encelia farinosa	Brittlebush
Eriophyllum confertiflorum	Golden yarrow
Bidens pilosa var. pilosa	Beggar ticks
*Chamomilla suaveolens**	Pineapple weed
Centaurea solstitialis	Yellow star thistle
Centaurea melitensis	Tocolote
Helianthus annuus	Annual sunflower
Bebbia juncea	Sweetbush
Hemizonia fasciculata	Tarweed
*Cynara cardunculus**	Cardoon
Ambrosia psilostachya	Western ragweed
Baccharis pilularis	Coyote bush
Lessingia filaginifolia	California aster
Achillea millefolium californica	California yarrow
Ericameria pinifolia	Pine bush
Gnaphalium bicolor	California pearly everlasting
BORAGINACEAE	BORAGE FAMILY
Plagiobothrys californicus var. californicus	California popcorn flower
Amsinckia menziesii	Fiddleneck
BRASSICACEAE	MUSTARD FAMILY
Hirschfeldia incana	Short-podded mustard
Brassica nigra	Black mustard
Brassica rapa	Mustard
CACTACEAE	CACTUS FAMILY
Opuntia littoralis	Coastal prickly pear
Opuntia prolifera	Coastal cholla
Opuntia oricola	Tall prickly-pear
CAPRIFOLIACEAE	ELDERBERRY FAMILY
Sambucus mexicana	Blue elderberry
CARYOPHYLLACEAE	CATCHFLY FAMILY
Spergularia arvensis	Stickwort
Silene gallica	Common catchfly

Scientific Name	Common Name
CHENOPODIACEAE	GOOSEFOOT FAMILY
*Salsola tragus**	Russian thistle
Chenopodium californicum	Pigweed or goosefoot
CONVOLVULACEAE	MORNING GLORY FAMILY
Calystegia macrostegia	Island morning glory
CRASSULACEAE	LIVE FOREVER FAMILY
*Dudleya multicaulis***	Many stemmed dudleya
CUCURBITACEAE	CUCUMBER FAMILY
Marah macrocarpus	Wild cucumber
CUSCUTACEAE	DODDER FAMILY
Cuscuta subinclusa	Canyon dodder
EUPHORBIACEAE	MULLEIN FAMILY
Chamaesyce albomarginata	Rattlesnake weed
Croton californicus	California croton
Eremocarpus setigerus	Dove weed
FABACEAE	PEA FAMILY
Amorpha californica var. californica	False indigo
Medicago sativa	Alfalfa
Lupinus bicolor	Miniature lupine
Lupinus densiflorus var. *aureus*	White-whorl lupine
Medicago polymorpha	Burclover
*Trifolium hirtum**	Red clover
Lotus scoparius	Deerweed
FAGACEAE	OAK FAMILY
Quercus agrifolia	Coast live oak
Quercus agrifolia hybrid	Coast live oak hybrid
GERANIACEAE	GERANIUM FAMILY
*Erodium cicutarium **	Red-stemmed filaree
*Erodium moschatum**	White-stemmed filaree
GROSSULARIACEAE	GOOSEBERRY FAMILY
Ribes speciosum	Fuchsia flowered gooseberry
LAMIACEAE	MINT FAMILY
Saliva leucophylla	Purple sage
Salvia mellifera	Black sage
Salvia apiana	White sage
Trichostema lanceolatum	Vinegar weed
Marrubium vulgare	Horehound
LILIACEAE	LILY FAMILY
Calochortus splendens	Mariposa lily
Dichelostemma capitatum ssp. capitatum	Blue dicks
Bloomeria crocea	Common goldenstar
Yucca whipplei	Our Lord's candle
MALVACEAE	MALLOW FAMILY
Malacothamnus fasciculatus	Chaparral mallow
PAPAVERACEAE	POPPY FAMILY
Eschscholzia californica	California poppy

Scientific Name	Common Name
PLANTAGINACEAE	PLANTAGO FAMILY
Plantago erecta	Foothill plantain
POLYGONACEAE	BUCKWHEAT FAMILY
Chorizanthe staticoides	Turkish rugging
Eriogonum fasciculatum	California buckwheat
RHAMNACEAE	BUCKTHORN FAMILY
Rhamnus californica	California coffeeberry
ROSACEAE	ROSE FAMILY
Adenostoma fasciculatum	Chamise
Heteromeles arbutifolia	Toyon
SCROPHULARIACEAE	SNAPDRAGON FAMILY
Castilleja affinis var. affinis	Coast Indian paintbrush
Mimulus aurantiacus	Orange bush monkey flower
Kickxia elatine	Sharp-leaved fluellin
SOLANACEAE	POTATO FAMILY
Lycium barbarum	Boxthorn
Nicotiana glauca	Tree tobacco
ANGIOSPERMS (MONOCOTYLEDONS)	
POACEAE	GRASS FAMILY
Agrostis pallens	Bent grass
*Avena barbata**	Slender oat
Avena fatua	Wild oat
Bothriochloa barbinodis	Cane bluestem
*Bromus hordaceous **	Soft brome
*Bromus madritensis **	Brome grass
*Bromus diandrus**	Ripgut brome
*Bromus tectorum**	Cheat grass
Hordeum jubatum	Foxtail barley
Koeleria macrantha	Crested hair grass
Melica imperfecta	Coast range melic
Stipa pulchra	Purple needlegrass
Lolium multiflorum	Italian ryegrass
Vulpia myuros	Rat-tail fescue

Alien species indicated by asterisk, special status species indicated by two asterisks. This list includes species observed on the site. Others may have been overlooked or unidentifiable due to season. Plants were identified using keys, descriptions, and illustrations in Hickman (1993), Munz (1974) and Jepson (1993). Taxonomy and nomenclature generally follow Jepson.

Plant and Animal Compendium

Plants

Scientific Name	Common Name
VASCULAR PLANTS	
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Sambucus mexicana	Blue elderberry

Scientific Name	Common Name
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Bloomeria crocea	Common goldenstar
Yucca whipplei	Our Lord's candle
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Scientific Name	Common Name
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Adenostoma fasciculatum	Chamise
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Mimulus aurantiacus	Orange bush monkey flower
Kickxia elatine	Sharp-leaved fluellin
SOLANACEAE	POTATO FAMILY
Lycium barbarum	Boxthorn
Nicotiana glauca	Tree tobacco
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Avena fatua	Wild oat
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*Bromus diandrus**	Ripgut brome
*Bromus tectorum**	Cheat grass
Hordeum jubatum	Foxtail barley
Koeleria macrantha	Crested hair grass
Melica imperfecta	Coast range melic
Stipa pulchra	Purple needlegrass
Lolium multiflorum	Italian ryegrass
Vulpia myuros	Rat-tail fescue

WILDLIFE COMPENDIUM

SCIENTIFIC NAME	COMMON NAME
AVES	BIRDS
ACCIPITRIDAE	HAWKS, EAGLES, HARRIERS, OSPREY
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
AEGITHALIDAE	BUSHTITS
Psaltriparus minimus	Bushtit
CATHARTIDAE	VULTURES
Cathartes aura	Turkey vulture
CERTHIIDAE	GNATCATCHERS
Polioptila californica californica	Coastal California gnatcatcher
CHARADRIIDAE	PLOVERS
Charadrius vociferus	Killdeer
COLUMBIDAE	PIGEONS AND DOVES
*Columba livia**	Rock dove
Zenaida macroura	Mourning dove
CORVIDAE	CROWS AND JAYS
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
CUCULIDAE	CUCKOOS
Geococcyx californianus	Greater roadrunner
EMBERIZIDAE	SPARROWS, WARBLERS, TANAGERS
Aimophila ruficeps	Rufous-crowned sparrow
Melospiza melodia	Song sparrow
Pipilo crissalis	California towhee
Passerculus sandwichensis	Savannah sparrow
Spizella atrogularis	Black-chinned sparrow
Ammodramus savannarum	Grasshopper sparrow
Chondestes grammacus	Lark sparrow
Pipilo maculatus	Spotted towhee
FALCONIDAE	FALCONS
Falco sparverius	American kestrel
FRINGILLIDAE	FINCHES
Carpodacus mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
Carduelis tristis	American goldfinch
HIRUNDINIDAE	SWALLOWS
Stelgidopteryx serripennis	Northern rough-winged swallow
Tachycineta thalassina	Violet green swallow
Hirundo pyrrhonota	Cliff swallow
ICTERIDAE	BLACKBIRDS
Euphagus cyanocephalus	Brewer's blackbird
Sturnella neglecta	western meadowlark
Molothrus ater	Brown-headed cowbird
LANIIDAE	SHRIKES
Lanius ludovicianus	Loggerhead shrike
MIMIDAE	MOCKINGBIRDS AND THRASHERS
*Toxostoma redivivum***	California thrasher
Mimus polyglottos	Northern mockingbird
PASSERIDAE	WEAVERS
*Passer domesticus**	House sparrow

SCIENTIFIC NAME	COMMON NAME
PHASIANIDAE	GROUSE AND QUAIL
Callipepla californica	California quail
PICIDAE	WOODPECKERS
Colaptes auratus	Northern flicker
Melanerpes formicivorus	Acorn woodpecker
Picoides nutallii	Nuttall's woodpecker
PTILOGONATIDAE	SILKY FLYCATCHERS
Phainopepla nitens	Phainopepla
STRIGIDAE	TYPICAL OWLS
Otus kennicottii	Western screech-owl
Bubo virginianus	Great horned owl
STURNIDAE	STARLINGS
*Sturnus vulgaris**	European starling
SYLVIIDAE	GNATCATCHERS
*Polioptila californica californica***	Coastal California gnatcatcher
TIMALIIDAE	WRENTITS
Chamaea fasciata	Wrentit
TROCHILIDAE	HUMMINGBIRDS
Calypte anna	**Anna's hummingbird**
Calypte costae	Costa's hummingbird
TROGLODYTIDAE	WRENS
Thryomanes bewickii	Bewick's wren
Campylorhynchus brunneicapillus	Cactus wren
Salpinctes obsoletus	Rock wren
TYRANNIDAE	**TYRANT FLYCATCHERS**
Contopus sordidulus	Western wood-pewee
Myiarchus cinerascens	Ash-throated flycatcher
Sayornis nigricans	Black phoebe
Sayornis saya	Say's phoebe
Tyrannus verticalis	Western kingbird
TYTONIDAE	BARN OWLS
Tyto alba	Common barn-owl

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SCIENTIFIC NAME	COMMON NAME
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Sylvilagus audubonii	Desert cottontail (observed)
Lepus californicus	California jackrabbit (observed)
SCIURIDAE	SQUIRRELS
Spermophilus beecheyi	California ground squirrel (observed)
CANIDAE	DOGS/WOLVES/FOXES
Canis latrans	Coyote (observed)

Alien species indicated by asterisk, special status species indicated by two asterisks. This list includes species observed on the site. Others may have been overlooked or unidentifiable due to season.